SPATIAL DISPARITIES IN AFFORDABLE HOUSING DEVELOPMENT ACROSS LOCAL GEOGRAPHIES: CONTEXTUAL CHANGES IN THE URBAN FRAMEWORK OF HOUSING AND THE TRAJECTORY OF AFFORDABLE HOUSING DEVELOPMENT OF BROOKLYN AS IT RELATES TO THREE LOCAL NEIGHBORHOODS

A Thesis Presented to the Faculty of Architecture, Planning and Preservation
COLUMBIA UNIVERSITY

In Partial Fulfillment
Of the Requirements for the Degree
Master of Science in Urban Planning

Prepared by

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December 2020

Abstract

New York City continues to face an unprecedented affordable housing crisis in the recent years as a result of contextual, ideological, and economic variables which have long influenced its development and expansion over the years. In this study, focus is placed on the contextual background of housing policies which subsequently paved the way for the urban affordable landscape we have today. Three neighborhoods are picked to perform closer case study analysis, those of Bensonhurst, Borough Park, and Brownsville. From there, three variables were analyzed, that of the share of subsidized housing towards the total housing stock per census tract, comparisons between median household income per neighborhood versus Area Median Income (AMI) classifications, and ultimately the direction of development patterns under the Housing New York plan of the de Blasio administration. The analysis on all three levels shows a lack of correspondence between the development of affordable housing units versus the actual geographic need for development and expansion. There is a critical need for the balancing of affordable housing development, and its equitable establishment across different neighborhoods over time. No specific directional policy is put in place, although guidelines of reasoning have been established to raise critical questions around the efficacy and applicability of the research.

Dedication

Dedicated to my beautiful mother, Natasha, and my humble father, Besnik, who selflessly became economic immigrants for a second time in their life, to a country where they had no connections and no knowledge of the language, simply hope and determination for a better future ahead.

Acknowledgements

This paper would not have been possible without the input and influence of a series of actors who have been instrumental in the development of the conceptual framework of this paper, through both their input as well as assistance with directional guidance.

I would first and foremost like to thank my advisor, Moira O'Neill, for her patience with me, and her applied guidance when it was needed most. Despite turbulent changes in topic directions and applicability of concepts on my end, she kept me on track and accountable for my deliverables and actions while working on this paper, and re-assured me of my abilities to complete the work to a degree representative of my abilities and the knowledge I gained through my two and a half years at Columbia.

I would particularly like to thank Richard Froehlich, who agreed to serve as my thesis reader, and whose extensive expertise in the field of affordable housing development and preservation was the determinant factor in the direction of this paper. His advice and recommendations in approaching this topic are rooted in this paper, and his recommendations of addressing the affordable housing framework from an overall outlook perspective, with emphasis on a few predetermined geographic locations proved to be instrumental to my understanding of affordable housing dynamics and how they influence the development of the urban landscape in New York.

Lastly, I would like to acknowledge all the incredible peers I had the opportunity to meet, become friends with, and share stories that will last me a lifetime. The past two and half years in this institution were challenging to a level I had not experienced before, yet having gone through the motions with people I now consider friends, made the experience a hundred times more enjoyable, and allowed me to expand my knowledge, appreciate different cultures, and generally become a more fulfilled and determined person as part of a larger community.

Table of Contents

List of Figures and Maps

Figures

Tables

Introduction

Within the United States of America, affordable housing has long remained one of the most critical debates on the political and legislative level. It is no secret that the affordable housing crisis[1] has expanded past metropolitan city borders over the past decades and continues to plague many newly developing and gentrifying neighborhoods across the country. From a historical standpoint, the first congressional efforts to address the lack of affordable housing began with establishing the national housing act and the federal department of Housing and Urban Development (HUD). The federal government established HUD to provide initial guidance and structure around expanding new affordable developments and financing programs due to the Great Depression and the dramatic loss of labor and service jobs over a decade (NLIHC, 2019). In a modern context, the development of affordable housing techniques has expanded significantly on both federal and state levels(Stoloff, 2004). Similarly, the urban housing affordability crisis in the western hemisphere is expanding rapidly. Workers' wages and salary incomes fail to adapt to the growth rate of living expenses within city centers and urban clusters (Wetzstein, 2017).

Despite state and federal efforts towards improvement in affordable housing policies, the expansion of affordable housing and its techniques (state and federal) have fallen short in delivering equitable, decent, and suitable living environments as stipulated by the Housing Act of 1949 (42 USC §§ 1441–1490r [1994]). The lack of affordable housing available trickles down to a series of subsequent issues that pose mental, physical, and emotional distress to residents

[1] Shaw, R. (2020). Generation Priced Out: Who Gets to Live in the New Urban America, with a New Preface. United States: University of California Press. "In a general context, the affordable housing crisis has taken many forms over the years depending on different geographic locations and methods through which policy or programs came short. Randy Shaw has authored a series of books on understanding and identifying the different types of affordable housing crisis that cities undergo, and classifies them amongst ending single family zoning, to building more housing, calling tech to do more, increasing tenant protections, amongst others. In context of this paper, affordable housing crisis is defined as the lack of accessible housing for the working and middle class portion of the cities' residents as described by Randy Show. This form of affordable housing crisis encompasses a composite nature of drawbacks in modern day implementation of policy across the spectrum. Affordable housing in NYC has generally existed for over a century.

that do not have access to it (Evans, Wells, & Mock, 2003). This point is reinforced, as the availability of housing equal and equitable to live in across all groups is a legally defined policy by the federal government. Not providing such is a direct government's direct failure to fulfill its roles based on their guidelines (Freeman, 2002). The lack of affordable housing is a leading cause of health disparity issues, especially for vulnerable populations. Effectively available affordable housing shows significant benefits and improvements to employees' and their families' well-being, cognitive childhood development, community relations, patient, and childhood care, among others (Perm, 2018).

New York City is a proprietor of affordable housing development resolutions, despite being one of the fastest-growing metropolitan cities globally. The first government intervention on the housing situation in NYC is accredited to have taken place in 1624, after the arrival of the original colonists in the area (Plunz, 1990). However, in modern times, the ongoing demand boom from both a domestic and an international level has diminished many available buildable lands in the area. In major urban hubs like NYC, however, where the increasing total luxury rental stock highlights rent discrepancies compared to new and existing affordable housing developments, the lack of affordable housing creates a shelter crisis. Subsequently, it hinders many people from thriving economically and socially (US Department of Health and Human Services, 2006). Enacted federal and state policies have shaped how development has expanded in NYC. Political influence is of central importance in many of these programs' success and failure as they stand today.

More than 200 financing techniques and incentives have been put in place to incentivize and subsidize affordable housing development in NYC on a program level. Out of those, more than 60% are currently active (NYU Furman Center, 2020). These programs address different

categories such as zoning, tax incentives, special housing, homeownership, stability and quality, land and financing, rental subsidies, and assistance programs. Similarly, the sponsoring government agencies range from city to state and federal. The progression of these policies and programs ultimately decides the development of affordable housing. This paper seeks to achieve three main focuses. One is to place NYC's urban and housing development into the contextual historical background in understanding the trends and ideological changes that influenced policy and development direction. Without undergoing a historical analysis of the urban development in place, it is insignificant to generate opinions based only on statistical data, and context, in this case, is critical. Second, it seeks to bring the development and spatial distribution of affordable housing units on a broad scale in the city in question. That analysis looks on a superficial scale to uncover visual gaps across affordable housing development between the boroughs. Lastly, it shifts focus on the spatial distribution of affordable housing in three Brooklyn neighborhoods to map and realize discrepancies across the development emphasis on affordable housing equally amongst them. The final discussion engages the concept of the right to life and the right to adequate housing as provisioned by international and federal capacities and argues on the extent to which the current affordable housing programs have provided equal access to affordable housing between the three case studies. The three neighborhoods of focus are Bensonhurst, Borough Park, and Brownsville.

Brief Housing History in NYC

Redlining

Housing practice and configuration in NYC have undergone drastic changes since the modern city's inception in the early 1800s. NYC's exponential rise as "the city that never sleeps" and the metropolitan center of the world contributed to the elusive desire of people migrating into city neighborhoods and gradually expanding the housing development demand outwards. However, the city's geographic framework is outdated with outright dysfunctional practices and turbulent transitions of ideological approaches to housing economics and development. The most famous such practice is arguably redlining.

Redlining is a discriminatory form of racial and socio-economic segregation through the withholding of mortgage lending in specific neighborhoods, effectively only stimulating economic and residential growth in racial clusters (Kantor & Nystuen, 2016). When optimized with market conditions, several dependent variables are taken into account to create classification zones that depend on both market and property conditions and socio-demographic data.

The study around the implementation of redlining primarily relies on a specific set of analysis procedures. These focus on favorable mortgage terms depending on the region (in rural areas, the focus was on single-family urban sprawl, while in cities mostly multifamily), the supply of in numbers and dollars across different geographic boundaries, and comparisons to overall area data (Benston, 1979). In this case, the primary aspect of mortgages was first pursued statistically by developing four equations to calculate these variables. Such equations focused on mortgages demanded, supplied, real estate transactions, and equilibrium (Ahlbrandt, 1977). Benston brings into discussion a mixed-use approach originally done by Shafer (1978), where he analyzed both qualitative and quantitative data. The study linked them back to coefficients to compare against dependent variables through mortgage and real estate development data. These studies, however,

face significant data limitations in separating the specific variables when looking at limited data, and the questions gear to understand why differences exist among specific census tracts (Hutchinson, Ostas, Reed, 1979).

In essence, the Federal Housing Administration published their 1936 Underwriting manual, detailing the provisions to incentivize and direct single-family zoning development. Specific points of consideration discouraged occupancy by specific races and arguing for the segregation of amenities, schools, residential neighborhoods, and retail operations access (FHA Underwriting Manual, 1936). These provisions specifically targeted the racial mixing of groups, effectively limiting the type of investments they could conduct. This type of effect heightened during the 1960s, but the roots for the current stipulations lie heavily on federal policies implemented at the turn of the 20th Century (NYU Furman Center, 2006).

In this paper's context, redlining is not the cause of the affordable housing crisis, but failing to mention its effects in the New York City urban framework would be a disservice to the patterns of expansion explored over time as the development of subsequent affordable housing. Redlining development split into four tiers; green, which was the most favorable one, blue, the second-best tier and still seen as a safe investment; yellow, to describe an area under transition for cautious lending; and lastly, red, which was the D zone. Red was the least favorable lending location in cities (usually located in inner cities and neighborhoods with a high concentration of non-white residents and immigrants) (Spellen, 2016). Ultimately, the impact of redlining on affordable housing is not as relevant as the policies that allowed for housing development. More specifically, redlining allows us to understand the distribution of where people live or could live and how those specific areas did in terms of property valuations compared to non-redlined areas.

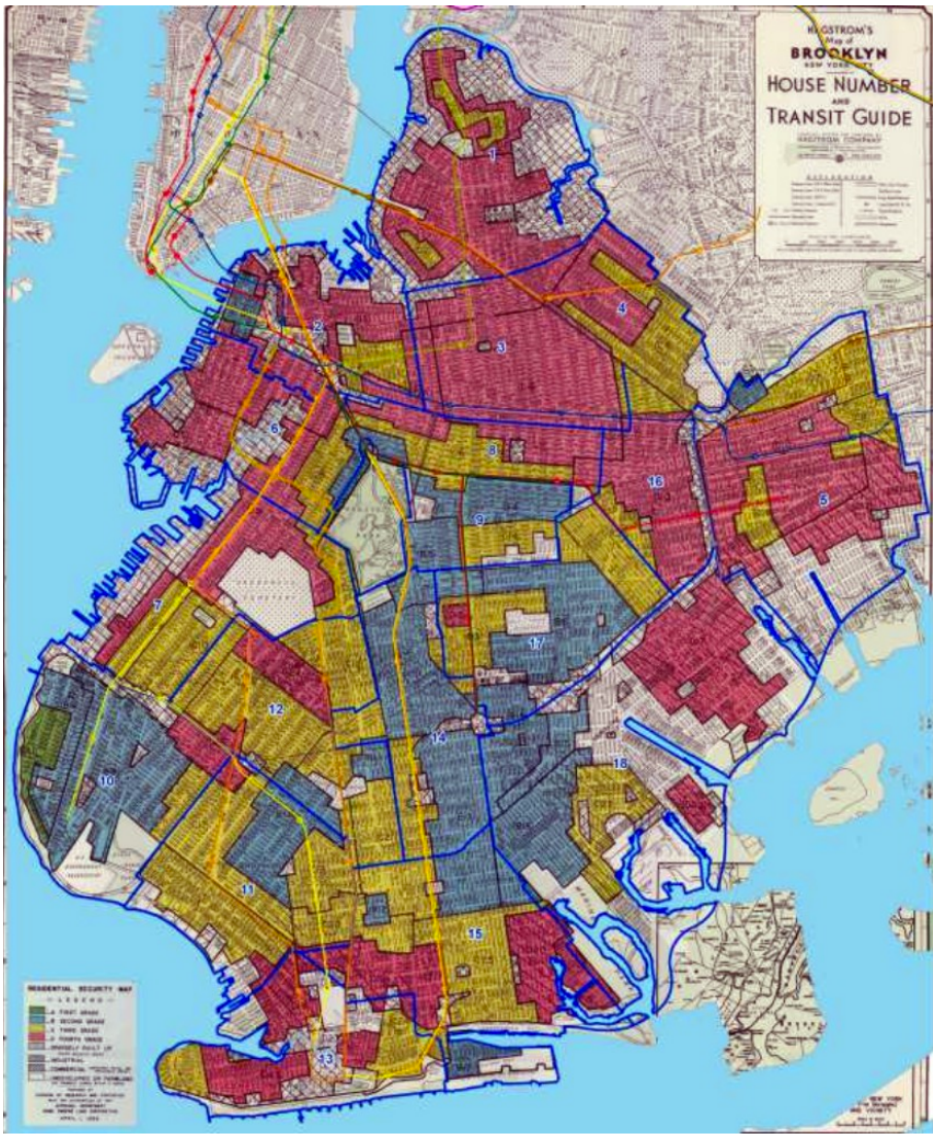

***Figure 1.01**: 1938 Brooklyn Community Zoning Map. Gathered National Archives, retrieved from: Brownstoner. "From Redlining to Predatory Lending: A Secret Economic History of Brooklyn"*

When examining the redlining map of Brooklyn, overlayed with the community zoning boundaries from 1938, an excess of geographic areas fell under red zones and were unfavorable to lenders. Looking closer at the neighborhoods of Bensonhurst, Borough Park, and Brownsville, there are apparent differences in their zonings. Brownsville falls almost exclusively under red zoning districts, whereas only a small part of Borough Park on the north side, extending from 36th street to 45th street, is redlined. The rest of the neighborhood was primarily in yellow

zones; thus, category C. Bensonhurst is split almost in half between its east and west sides, with the east side being under category B and west side under category C. These classifications are engaging in this case, as they portray a pivotal part of the history of urban and affordable housing development in the area. Lack of institutionalized lending in entire geographic regions has long-lasting effects that contribute to many issues that range from education, living, mental health, and adequate healthcare, among others, as reported in the study conducted in the neighborhood of Brownsville in Brooklyn(Leonhardt, 2018).

Recent research on this topic supports the notion that formerly redlined areas generally remain more segregated and economically disadvantaged today. Those same neighborhoods often have a lower median household income, lower home values, homeownership percentages, and lower rents in general, but higher when compared against total household income (Perry, Harshbarger, 2020). The study also further concludes that those selected characteristics diverge less on smaller redlined areas over larger metropolitan regions. In 2018, a study conducted by Bruce Mitchell, Ph.D., as part of the National Community Reinvestment Coalition (NCRC), further showcased the long-lasting impacts in redlined areas that differ from other regions. The study, which focused on persisting structures around segregation and economic inequality, concluded that overwhelming evidence continues to support the perpetuation of those variables even today. It further found that 74% of areas designated as "hazardous" or redlined maintain a low-to-moderate income today (Mitchell, 2018). Recent research supports the existence of variances in redlined areas today, especially as they pertain to socio-economic factors around affordability, income, and ownership.

Research on redlining also further demonstrates environmental differences found in areas that redlined versus areas that were not. Perhaps one of the most studied impacts of urban

development is how natural elements affect the people. Extreme heat is understood to be the most hazardous weather event (Hoffman et al., 2019) due to the total number of deaths caused overtime. Urban heat can be as far as 7 degrees Celsius higher in previously redlined areas than other urban areas and predominantly occupied by resource-limited communities and people of color (Ibid.). Additional study on mean land surfaces in redlined areas in Kansas City, Baltimore, and Dallas demonstrates a higher mean land surface temperature in redlined areas than non-redlined areas (Wilson, 2020).

Undeniably, variance in socio-economic, health and environmental variables portray apparent differences in previously redlined areas when compared to other urban areas near them. Redlining is arguably one of the fundamental principles that defined the urban built environment (An, Orlando, Rodnyansky, 2019). However, redlining is not the only determinant for NYC's existing affordable housing framework (as mentioned previously). It is vital to further the conversation by acknowledging the ideological shift that the political framework of NYC underwent during the early 1970s, which defined the development future of NYC as a whole over the following decades, as well as the ways through which local zoning legislations helped shape individual neighborhoods from one another.

Ideological & Paradigm Shifts

There are multiple schools of thought on a theoretical framework that contribute to the leading factors causing NYC's affordable housing crisis. In this case, the brief emphasis placed on implementing housing policies that promoted market-driven development solutions and proposals during the second half of the 20th century is very insightful. The driving forces, in this case, being the Housing Act of 1949, the Housing Act of 1968 during the Nixon administration,

as well as the moratorium placed on subsidized housing commitments in January of 1973 (Orlebeke, 2000), which in turn led to a series of new policy developments described later in this section. Furthermore, the transition of housing policies from federal to state and local took place through the Housing Act of 1990 and the HOME housing block's establishment. Funding for housing production and rehabilitation shifted control from federal to local officials. Orlebeke argues, in this case, that pre-block grant programs found in the 1960s and 1970s presumed federal control before ultimately shifting to local jurisdiction. Lastly, a final shift is understood through the use of tax credits for the development of low-income housing, or otherwise known as the LIHTC program, enacted in 1986

This ideological transition effectively creates favoritism zones, limiting the potential expansion of diverse socio-economic groups, and leading to sudden bursts of economic development, effectively rendering a significant percentage of the population to struggle and keep up with increasing rent prices (Whitlow, 2019). The manifestation of such ideological changes subsequently led to the development of targeted housing policies, such as Section 23 of the Leased Housing Program, developed in 1965, which has now involved to encompass housing choice vouchers instead of large-scale subsidized housing programs (Orlebeke, 2020). One can now easily see this development across different neighborhoods and clusters in the NYC boroughs. A clear example is when taking a historic walkthrough on Williamsburg's urban development in Brooklyn; one sees the apparent effects of gentrification and displacement in the area compared to its historical context. In a contextual study performed through qualitative methods on NYC's housing framework, landlords and realtors attribute the general rental housing structure in NYC as the reason for the reproduction of Housing Choice Vouchers (HCV) in clustered, predominantly high poverty areas (Yaskil, 2014).

This housing development framework's rapid transition is due to the NYC real estate market's expansive influence and the continuous demand for new and improved buildings. Whitlow attributes a large contributor to this crisis as the political economy's direction to incentivizing rapid growth. Karl Polanyi (2001) made these remarks that fundamentally alter the type of processes the city puts in motion, moving away from considering the social, community, ecological, and personal impact, focusing on rationalized, return, and investment-driven approaches.

This transition did not occur overnight, but it was instead a response to the rapid development of the fiscal crisis the city was facing at the time. In pivotal research on this matter, Madden and Marcuse (2016) argue that NYC's affordable housing crisis links to this shift in housing policy towards localized, market-driven development of our cities. They describe the housing problem as one of political-economy. Frankly, the two define the conflict as "between housing as a lived, social space and housing as an instrument for profitmaking -a conflict between housing as a *home* and as *real estate."* This clear distinction in the housing policy approach aligns with Orlebeke's research in 2000 and clearly defines the problem. Essentially, through changes in political direction on the physical framework of NYC, local communities became disenfranchised, and all physical elements in neighborhoods became monetized (Liifund, 2014). These changes have, in turn, shaped the progression of housing development in NYC, and fundamentally its meaning. However, that is not to say that market-driven economics was the only factor responsible for the subsidized and overall housing development in NYC. Many factors have led to the development of the urban network as it exists today. When considering the population boom in the region, the expansion of transit lines that could travel from borough

to borough in short times, and the following localized zoning policies in each region, the influences become more apparent.

The next two sections focus on providing a brief analysis of the change in housing market trends over the past century and development patterns attributed to a rapidly growing market, focused on continuously filling the demand gap through the development of housing and office class structures geared to increasing the influence of NYC in the global market. This ideological shift is integral in understanding the focus of development patterns across different neighborhoods, how local and state policies influenced the direction of the urban framework, and ultimately the current condition of affordable housing across the city.

Change in NYC Housing and Urban Development Trends

The real estate market, and primarily the NYC urban framework's housing stock, has undergone significantly different phases throughout each decade (Miller, 2012). The table below provides an average rent estimate per month across all units, their change across the century, and an average sale price per square foot and its trends over the same decades.

Table 1.01. NYC Market Trends by Decade

Decade	Average Rent/month	Average Sale Price/psf
1910	$ 40	$ 8
1920	$ 60	$ 15
1930	$ 45	$ 5
1940	$ 50	$ 8
1950	$ 60	$ 12
1960	$ 200	$ 25
1970	$ 335	$ 45
1980	$ 1,700	$ 250
1990	$ 3,200	$ 590
2000	$ 3,800	$ 1,200
2010	$ 3,500	$ 1,070

Data Source: Change is the Constant in a Century of new york City real estate, by Jonathan Miller. Eilman.com

Average NYC rental prices were at $40/month across 2.3 million residents in the early 1910s. Sale prices at $8/psf. During the 1920s, new developments pushed further upwards and east on Manhattan, with specific zip codes rising dramatically around Central Park. Rental prices increased to $60/month while sales nearly doubled at $15/psf. In the 1930s, and following the crash leading to the Great Depression, sales diminished by over 30%. Rentals improved within the first half of the decade and steadily after. However, prices dropped significantly, with sale price/psf dropping lower than two decades before at an average of $5/psf. Following the Great Depression and into the Second World War, prices hit the rates of all time in the city. Followed quickly after the end of WWII, the housing shortage became prominent (Ibid.).

Two variables are essential to mention in this case, those being the population growth over time, as well as the production of new housing units over the 20th century. The vast majority of housing production in New York City took place during the 1920s, as demonstrated by the graph below, extracted from the NYC Department of City Planning Housing in 2019.

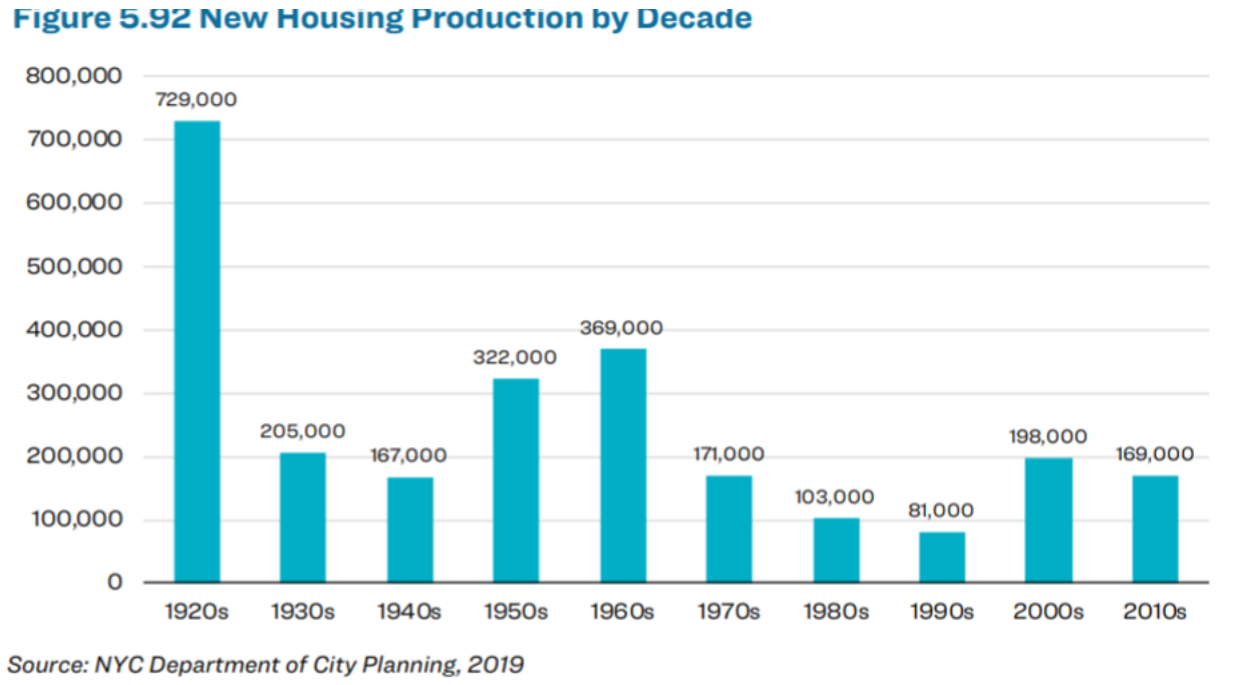

***Figure 1.02**: New Housing Production By Decade*

The following chart showcases the total population count in New York City beginning from 1900 until 2010. The total population count was 3,437,202 at the 1900 U.S. Census, and the most extensive recorded changes took place during the 1910s when the population grew by 1,329,681 people, and during the 1930s, when the population grew by 1,310,398 people. It is notable that the population steadily decreased from 1930 until the end of 1960, after which it bounced back slightly by just over 100,000 people during the 1970s, followed by a sharp drop of 823,223 people during the 1980s. The population then grew a bit during the 1990s and 2000s, but growth stagnated and dropped in the 2010s again. Compared to the new housing production by decade, the two charts do not match accordingly by decade. However, they do portray general

pattern similarities as we see growth in new housing having followed decades of high population growth, and a general attempt to keep up with demand in new housing needs followed through the early population boom and the brief resurgence during the 1990s and 2000s.

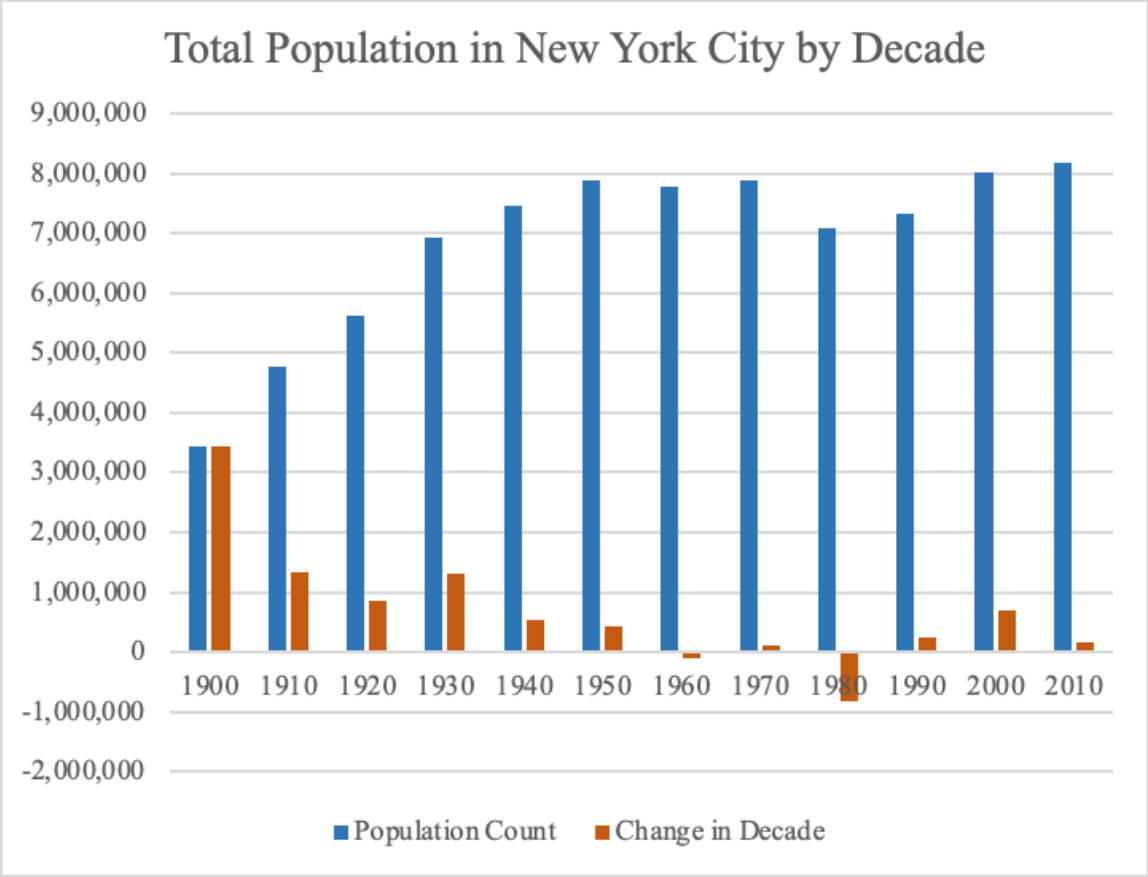

***Figure 1.03**: Total Population Count & Change in New York City – 1900 – 2010 – U.S. Census Bureau*

On the other hand, the spike in housing prices is seen in the two figures below, beginning slowly during the 1950s, and rapidly increasing from 1970 and onward. The sudden demand from the end of WWII and after was building up during the 1940s and 1950s, and the need for new housing to put migrants and workforces became increasingly critical. By this point, the city of New York has had a continuous growth in population for the initial half of the century, while the second half was followed by ranging growth and drops in the total population count.

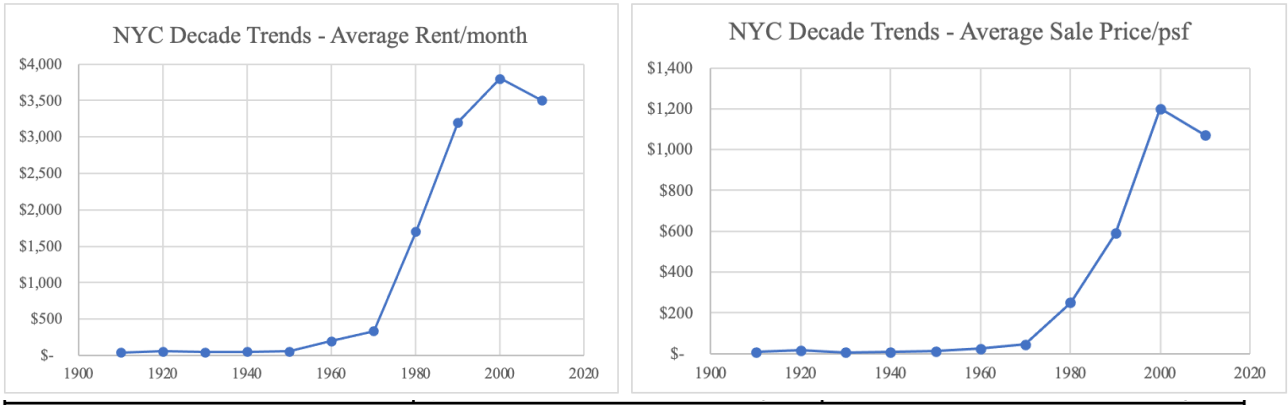

***Figure 1.04**: NYC Decade Trends – Avg. Rent/month.* ***Figure 1.05**: NYC Decade Trends – Avg. Sale P./psf*

These figures presented in the graph, in this case, are not reflective of inflation, and therefore showcase simply a linear progression for average rent and sales prices per square foot. The inflation-adjusted impact showcased in the graph below shows where all-decade trend prices are adjusted based on 2020 inflation rates. We see the bell curve of the chart follow the same patterns as presented above. Inflation calculated against the 2020 rate of inflation and presented cumulatively for each decade compared to its respective time.

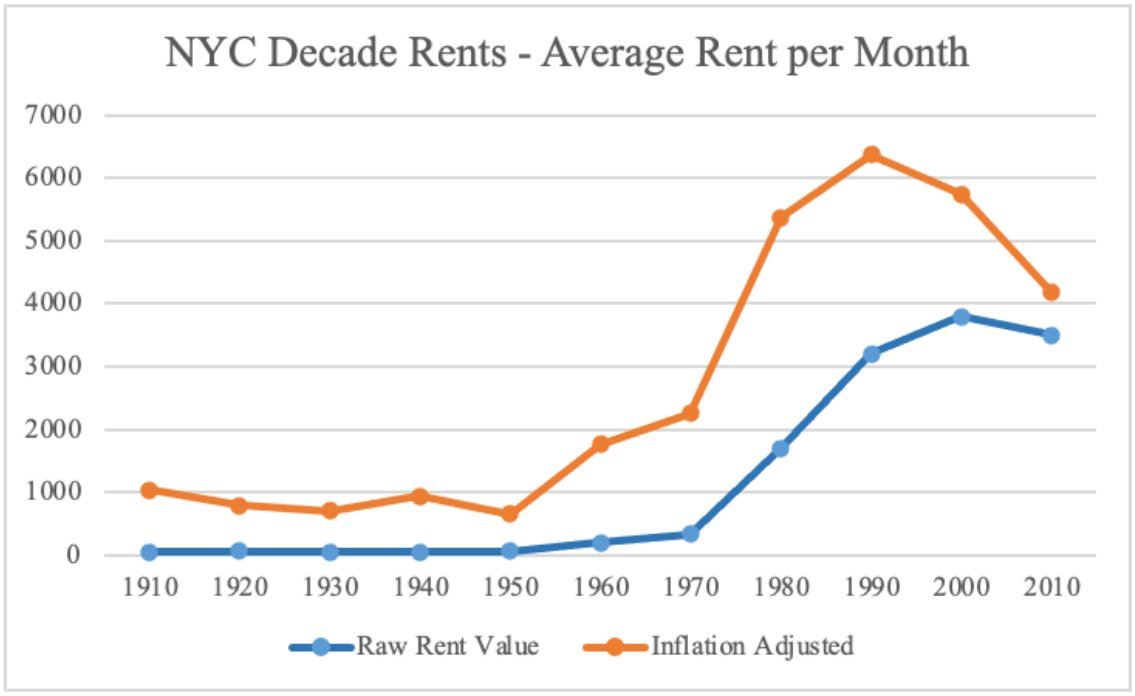

***Figure 1.06**: NYC Decade Rents – Average Rent per Month w/ Inflation*

Rents and sale prices rose to $60/month in rent and $12/psf for sales as an average, while co-ops and condos became the legal developments for density purposes. At the end of 1961, the Zoning Resolution passed the year before came into effect (NYT, 1961). NYC established a foundational change in the use of floor area height (FAR) as a developing regulatory framework, and subsequent height bonuses in exchange for providing public plazas, open areas for residents, and parking services. This program further expanded to include additional incentives such as infrastructure improvements in exchange for similar benefits. Compared to earlier 20% increases decade to decade, rental prices increased more than 200% from the 1960s into the 1970s, and average sales price tripled at $45/psf (Miller, 2012). Between the 1970s and the 1990s, rental prices increased ten-fold, at $3,200/month, and continued to rise until the Lehman bankruptcy, topping at approximately $3,800/month, and with sales at $1,200/psf as average in 2000, then scaling back a bit during the 2010s (Ibid.). The numbers analyzed here are presented in constant dollar value once again, although the relationship to inflation-adjusted dollars is above.

It is also important to note that the prices here reflect market pricing and not affordable housing rates. This distinction is made later on in the paper as affordable and subsidized housing is financed and priced through vastly different measures that are not respondent to market pricing in the immediate area directly. Taking a closer look at the zoning of affordable housing development framework across New York City, the specific neighborhoods in question for this paper, and how they relate to general market trends allow us to make further assumptions on the pricing to understand spatial disparities.

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Housing Development and Trends in Brooklyn

Brooklyn underwent significant sociodemographic and urban development shifts over the two decades, based both on investment in neighborhoods, as well as demographic fluctuations between the 1990s and into the 2010s. The housing landscape of Brooklyn is one of the most influential factors that define neighborhoods, socio-economic groups, ethnic linkages, and the methods through which they come together to define modern neighborhood landscapes today. Warf places those socio-economic factors into great spatial context in his paper from Society and Space in 1990, where he discusses the effects of the housing market structure in the formation of neighborhoods as part of a composite text. He interprets the original division of housing characteristics as a sub-product of labor division and ethnic clustered distribution across local geographies. He attributes one of the more significant housing and urban reconstruction waves to have occurred after the financial crisis during the 1970s and following the direction of substantial rent increases in Manhattan during that same period. Overall, the housing cost in Brooklyn rose and gradually drove marginalized groups, elderly, and ethnic communities steadily out of their homes as market rents outpriced earnings (Ibid.).

Brooklyn's gentrification originated in its northwest corner, was found closest to Manhattan, and gradually expanded to encompass adjacent communities over the years. Black neighborhoods, on the other hand, saw little development that followed the trends of Manhattan market economics (Ibid.). Warf attributes this development to perpetuate class divide and create social and territorial segregation of groups and housing in predominantly black neighborhoods, effectively arguing that one should understand the housing and urban development framework through its specific historical legacy and identity context.

Earlier in the paper, we discussed how the ideological shift in housing, the rise of neoliberalism during the 1970s, and the current ongoing affordable housing crisis relate to the overall shift of gentrification patterns in Brooklyn present today. During that time frame, the local government disinvested in public housing programs. Instead, it relied almost solely on zoning amendments and changes in bringing in the urban framework's desired changes (Angotti, Morse, 2017). Following disinvestment in public housing, the development trends shifted to incentivized and tax-credit abatement development, where developers build a few affordable housing units per development to receive tax equity credits abatements from the city. The tax credits only apply to affordable units. However, this financing structure method changed the Brooklyn housing landscape significantly.

By now, Brooklyn has undergone rezoning procedures on the waterfront, and white residents have moved into their desired neighborhoods. In contrast, historically marginalized communities have been further marginalized and pushed to other Brooklyn and Queens areas (DeSena, Krase, 2015). There are some prominent examples of displacement in Brooklyn. The ethnic Polish community gradually pushed out of Greenpoint (Goworowska, 2008) and the "third wave" gentrification in Brooklyn Heights (which poses questions to the historical continuity of current manifestations of gentrification with previous generations of neighborhood change) (Lees et al., 2003) are two recent examples. Most famous is Williamsburg, where industrial gentrification shifted zoning regulations and transformed formerly industrial areas into residential, bringing about economic and sociodemographic change and degrading blue-collar work that remains in the region (Curran, 2004). In 2006, and under Bloomberg's administration, the Planning Commission up-zoned multiple neighborhoods in Brooklyn that contributed to the development of bigger and

taller residential buildings, perpetuating the elements of gentrification and displacement in the area.

Nevertheless, the ratio of affordable housing units continued to shrink compared to market-rate housing growth for many neighborhoods. For others, the affordability level was not directly representative of the neighborhood's wage incomes (Holopainen, 2020). The Bloomberg's administration preserved 165,000 affordable housing units. In comparison, it created 60,000 new subsidized units as part of his affordable housing plan. However, data researchers from the Furman Center found that the city's affordability level continued to decrease, as wages did not rise to meet the growing rents (Rodriguez, 2013). Other previously subsidized units also went off of rent stabilization. The graph below, produced by the New York Times in 2020, showcases the median rent increase across the accumulative studio, one-bedroom, two-bedroom, and three-bedroom apartments for all Brooklyn neighborhoods, from 2010 to 2018.

Soaring Rents

Neighborhoods with highest percentage median rent increases.

NEIGHBORHOOD	2010	2018	CHANGE
Williamsburg/Greenpoint, Brooklyn	$1,207	$1,854	54%
Brooklyn Heights/Fort Greene, Brooklyn	$1,571	$2,116	35
Morningside Heights/Hamilton Heights, Manhattan	$1,133	$1,521	34
Bedford–Stuyvesant, Brooklyn	$1,083	$1,409	30
Upper West Side, Manhattan	$1,734	$2,229	29
Bushwick, Brooklyn	$1,253	$1,592	27
South Crown Heights, Brooklyn	$1,177	$1,491	27
Central Harlem, Manhattan	$902	$1,140	26
Bensonhurst, Brooklyn	$1,151	$1,410	23
Sunset Park, Brooklyn	$1,312	$1,600	22

Sources: NYU Furman Center, coredata.nyc • By The New York Times

Table 1.02: Rent Increase from 2010 to 2018 by Neighborhood Tabulation Area. Retrieved from New York Times *"The Decade Dominated by the Ultraluxury Condo",* 2020.

The existent rents showcase a dramatic percentage change over the years, with Williamsburg and Greenpoint leading the change. NYC has also had an influx of new money and the geographic pinpoint of up-zoning legislation. Seven out of the ten neighborhoods with the most remarkable change in median rent increases from 2010 to 2018 are in Brooklyn. Bensonhurst, one of the focus neighborhoods, is ninth on the list, with an average change of approximately 23% over the eight years. The rise in rents is indicative of a changing rental landscape across New York City. However, more particularly, its implications can be further understood when looked over against the Average Median Income for the area and the distribution of housing units across volume and size to understand its affordability levels better.

Aside from placing into context the overview of the housing trends in Brooklyn and NYC over the past years, and their patterns within select neighborhoods, it is vital to understand the affordable housing programs available today. Few programs make up a significant portion of the city's affordable housing stock, and local zoning differences play direct roles in neighborhoods' urban development. An analysis of those programs and the plans to implement them showcases how market-rate trends and patterns subsequently affect affordable housing development. This analysis will help portray the uneven distribution across local geographies that do not correspond with affordable housing needs for the city as a whole and the three neighborhoods in question. The following section will go over the most prominent affordable development programs. The programs are aggregated and researched as a composite as part of NYC's overall affordable housing framework. This overview approach of the affordable housing development landscape in NYC will feed into the more significant considerations of this paper, which gear around the idea of what the general housing policy is, how it gets implemented, and how it is done so in a manner that improves the affordability levels in neighborhoods?

Affordable Housing Development

NYC Housing Programs Overview

NYC's affordable housing program structure is one of the most complex administrative works that utilize a combination of federal, state, and local tools. The directory of applicable affordable housing programs expands across a century and a considerable variety of political administrations and urban development phases. Thus, today's available programs represent a collective of the federal and state interventions and local government put in motion to address access to affordable housing across different contexts. Some programs have prevailed over others, and many programs that were outdated ended. The distribution of those programs remains a challenge today, and collective city enacted plans to address their availability as part of the latest administration.

The different affordable housing programs can be studied separately to understand their implementations and distributions around the boroughs. However, one should also look at the composite perspective to study nuances and gaps in their distribution. As such, we emphasize newly enacted affordable housing programs, not just the lottery programs, but rather the composite of affordable housing stock in the city is looked at individually and across communities.

However, in modern times, the ongoing demand boom from both a domestic and an international level diminished many of the available buildable lots in the area. For the most part, the government maintained a back seat in intervening in cities' urban development until, of course, the urbanization started to rapidly pick up at a pace that needed oversight and intervention. The shift happened from 1926 and after, when Alfred E. Smith, then-governor of New York, signed the Limited Dividend Housing Companies Act. The Act created the first structured program of offering private developers property-tax abatements to allocate a certain percentage of affordable units in their buildings (Anzilotti, 2016). Over the past century, the city has developed affordable

housing programs to address the climbing need for affordable units in the boroughs. The following section summarizes the significant programs in use today.

Public Housing – New York City Housing Authority (NYCHA)

1. The New York City Housing Authority public housing is one of the longest-running available residential stocks providing adequate housing for low and moderate-income (NYC Housing Authority, 2019). Initially established in 1935, the NYCHA program's purpose was to create affordable housing for all New Yorkers of low and moderate-income; currently, 1 in 15 New York residents reside in a NYCHA unit. The state and city utilized federal support to initially create NYCHA. This provision took place after the National Housing Act passed in 1934. NYCHA has been facing a steady budget decline and operating at a loss since 1988 (NYCHA Fact Sheet, 2019). Currently, 564,301 New Yorkers live in NYCHA public housing and Section 8 voucher program housing administered by NYCHA, Housing Preservation & Development (HPD), and New York State Homes and Community Renewal (NYSHCR). Section 8 housing is a provision passed as part of the Housing and Community Development Act of 1978 to provide voucher assistance to low and moderate-income residents due to the greater availability of market-rate housing in the city (NYC Housing Authority, 2019). As a total, NYCHA public housing encompasses 7.9% of the total rental apartments available in the city. In Brooklyn, specifically, NYCHA housing has 99 developments with a total of 58,422 units in them, housing 131,024 people (NYCHA Fact Sheet, 2019). Average rent remains at approximately 30 percent of the total household income in 2019, with the Department of Housing and Urban Development (HUD) subsidizing the remainder of the rent (Ibid.).

Housing Choice Voucher Program (HCV) – Section 8 & Section 9 Public Housing

2. As briefly mentioned in the paragraph above, Section 8 portable vouchers are NYC's longest running voucher programs. NYCHA housing is the primary administrator of said vouchers for renters. Section 8 vouchers have two categories, portable vouchers, and project-based building vouchers. Project-based Section 8 housing is primarily part of NYCHA, as the vouchers subsidize the remaining rent in public housing after a 30% income threshold (HCV Administrative Plan, 2020). Section 8 vouchers do not describe the total number of voucher programs in NYC. However, they are currently the most frequently used, as 82,225 households have Section 8 vouchers that continue to be active today (Ibid.). The second component of Section 8 vouchers are the portable vouchers, a now fully utilized program on hold, and all applicants on a waitlist. The composite of Section 8 vouchers falls under the Housing Choice Voucher Program (HCV), a jointly funded federal and state program. HCV allows tenants receiving subsidized vouchers to choose their residence amongst market-rate units without being confined to specific buildings that accept them. There are provisions to ensure no discrimination happens from the landlords' perspective against a renter paying part of their rent with vouchers.

   Section 9 Public Housing is part of the NYC Public Housing Authority (PHA). NYCHA public housing developments are the primary holder for Section 9 housing. Section 9 differs from Section 8 vouchers and project-based programs as the city owns public housing and administers it through a city-wide public housing administration. Therefore, the buildings that are public housing are not part of the Section 8 voucher program, although there are project-based Section 8 housing vouchers that allow for renters to stay in privately owned and managed units. Project-based Section 8 housing is a big part of development growth and makes up a significant percentage of total renters in NYC, at

11.6% when combined with Section 8 voucher recipients. NYCHA public housing alone serves 87,515 families, over 50% of total NYCHA reach.

Section 8 vouchers' efficacy has recently come into the forefront again, as the federal government, in conjunction with HUD, passed the Rental Assistance Demonstration (RAD) tool in 2008. The RAD tool is an effort by HUD to enable the transferring of public housing (Section 9) under private developers, under the provision that the developer will perform necessary improvements in the units, and offer the opportunity to the previous tenants to reenter into their lease agreement for affordable housing (Section 8). HUD would further subsidize the rent. The creation of this program was put in place by the Obama administration to address the need for significant public housing repairs (Ibid.). Due to the lack of funding for much of the public housing stock to perform necessary unit and building repairs, private developers assume the repair and construction costs and effectively transition a public housing development into section 8 voucher housing. This provision ensures that the developer will offer the opportunity to temporarily displaced tenants to resign their lease. The developer will maintain the affordability levels for a minimum of 20 years without changing the total number of initially available units. Further safety provisions are put in place to expect the automatic renewal of existing leases at expiration unless exuberant circumstances warrant otherwise. Currently, RAD is the best functioning program to address and combat the continuous deregulation of affordable units as buildings gradually opt-out of the affordability requirement.

Rent Regulation

3. NYC's rent regulation system encompasses all and any programs that create regulatory frameworks limiting what landlords can charge for rental apartments. More specifically, in

NYC, the rent regulation framework focuses on two categories of rental assistance programs.

a. One program is Rent Stabilization (RS), and the other is Rent control (RC) (NYU Furman, 2020). Rent stabilized (RS) apartments describe a majority of the total subsidized housing stock in NYC, and as a program, it is generally considered expansive and of large scale (Ibid.). Only properties built between February 1st, 1947 and January 1st, 1974, for all buildings with six or more units qualify. Tenants in such buildings would also qualify, assuming they moved in after June 30th, 1971. Lastly, rent stabilization also covers buildings build post-1974 that have undergone construction & renovation or preservation. The landlords have agreed to maintain rent stabilization components in the development over time. The concept behind rent regulation is to ensure that renters will have general living and housing stability and that they will not be effectively priced out of their rent. Regulations reinforce this through the established regulatory measures capping the annual percentage in rent increases and providing mandatory lease renewals to tenants (Ibid.).
b. The second program falling under the rent stabilization provision is Rent Control (RC). RC predated the rent stabilization regulation and was established in 1943 to address the growing inequality in NYC's affordable housing development. The provision only applies to buildings built before 1947 and extends across 51 municipalities, with the most significant use seen in NYC (NYU Furman, 2020). Rent control remains in effect, assuming the same tenant is in place. When a rent-controlled tenant moves out, the apartment subsequently becomes rent-stabilized.

The rent regulation programs are currently benefiting a large quantity of New Yorker's, comprising more than 44 percent of the rental stock in place as of 2017 (Rent Guidelines Board, 2019).

Mitchell-Lama Housing Program

4. The Mitchell-Lama Housing Program is a financing subsidy provided to developers to provide affordable housing units in new developments over 20 years at a minimum, excluding developments built before 1959, which assumed a 35 year subsidy period (NYU Furman, 2020). Thus, the program has overseen the construction of 269 buildings so far to ensure developers placed units in middle-income level cap brackets in exchange for RE tax exemptions over 20 years and low-interest mortgage loans. The program was initially established in 1955 and has generally maintained oversight by a series of government entities such as the HPD, HCR, HDC, and FHA. The Mitchell-Lama program does not, however, lock developers into provisions of permanent affordability as many can opt-out of the rent limits after 20 years. Due to this provision, accessibility to Mitchell-Lama housing is scarce nowadays. Many developers are opting out of the middle-income rental limits as their minimum tenure comes to an end. By the 1990s, 93 out of 269 buildings had opted out (Etherington, 2019). Currently, approximately 100 developments remain as part of the Mitchell-Lama Housing Program. However, Mayor de Blasio's affordable housing program has pledged over $250M to ensure the preservation of affordability measures in more than 15,000 units (NYC.gov, 2017).

Inclusionary Housing Program

5. The inclusionary housing program (IHP) is a provision in 1987 by the NYC HPD & NYC DCP to preserve affordable housing across all neighborhoods undergoing upzoning or zoning modification procedures. The overarching program encompasses two subsections,

Voluntary Inclusionary Housing (VIH) and Mandatory Inclusionary Housing (MIH) (NYU Furman, 2020).

a. VIH allows voluntary participants to increase their total buildable square footage through a density bonus, assuming the construction or rehabilitation of permanently affordable housing. This program incentivizes developers to increase the total units built in an area and provide flexibility to developers. Developers can subsequently compare the financial returns of providing affordable housing and undertaking a larger project, versus following simply market rates and building only up to the allowable buildable square footage.
b. MIH is a mandatory provision of the IVP, enacted in 2016. MIH zones are in medium and high-density areas, and housing law requires developers to provide a specific portion of new developments to be permanently affordable (Ibid.). More specifically, newly MIH zoned areas require all developments of over ten units or 12,500 zoning square footage to provide affordable housing designations for a specific percentage of units or otherwise contribute to an affordable housing fund. Like VIH, HPD is responsible for the oversight of the MIH program (NYC.gov, 2020).

Tax Incentive and Tax Abatement Programs

6. There are multiple public programs, both on the state and the federal legislative level, providing different tax exemption options and tax credit equity contributions for the development of affordable housing and supportive housing units. The three most frequently used programs are the following: the Low-Income Housing Tax Credits (LIHTC), a federally sponsored program, the 421 benefits program, a local tax exemption

abatement program set in place with multiple classifications, and the 420 benefits program, a tax exemption structure for low-income housing and HDFC-owned units.

a. Developers can obtain Low-Income Housing Tax Credits to develop new construction or the rehabilitation of projects (NYC HPD, 2020). The program was created under federal law and the Tax Reform Act of 1986 (P.L. 99-514) and has enjoyed some of the highest usages amongst other tax incentive and tax abatement programs. The LIHTC program is accredited to have financed the development and rehabilitation of more than 3.3 million apartments across the nation since its inception (Berger, 2020). The program is commonly used in part because of is its extremely competitive developer incentives in place. The federal program allows state housing agency officials to tax credit allocations for a specific development project. These credits get subsequently distributed to investors who purchase over 99.9% interest in that specific development (NMHC & NAA, 2020). The program works by offering dollar-to-dollar reductions in tax liabilities on a federal level and is split across two subsectors of possible utilization, 4% "as of right" credits and 9% competitive credits. The two programs' difference revolves around the subsidized development criteria and the exact percentage distribution of affordable units in the entire development. The 4% housing tax credits allow developers to stack the credits with additional funding programs and come if 50% of the low housing units get financed with tax-exempt bonds. The 4% tax credit is allocated based on the provisions described above. In comparison, the 9% competitive tax credits usually remain reserved for new construction of affordable housing or substantial rehabilitation of existing affordable housing.

b. 421 tax benefits split across multiple categories, each serving different communities and development types, while a few have some overlap. There are three 421 tax incentive programs. 421-a is the most popular tax exemption regulation for the development of new buildings. 421-b provides partial tax exemption for new constructions, substantial rehabilitation, or owner-occupied single and two-family homes. Lastly, 421-g offers a tax exemption and abatement for converting commercial buildings to multi-dwelling units in lower Manhattan (NYCHPD, 2020). Therefore, the most frequently used of the three parts are 421-a exemption benefits, an exemption which depends on the NYC HPD eligibility criteria, and vetted through an application process to certify a building's eligibility (NYC DOF, 2020). The 421-a program tax incentive was initially established in 1971 but has since experienced multiple alterations overtime. Most importantly, the city expanded the now restructured 421-a benefits program and renamed it into the Affordable New York Housing Program in 2017 (NYU Furman, 2020). The 421a benefits are a critical and mostly expansive multi-family rental housing tax exemption program for new development.

c. The third tax incentive program splits between 420-a and 420-c. For projects to be eligible for 420-a tax incentive benefits, the project must be owned or controlled by a non-profit Housing Development Fund Corporation (HDFC), allocate a specific amount of units towards low-income, formerly homeless, and special needs housing separately. The benefit of using 420-a tax incentive is complete tax exemption from real estate taxes for however long the development remains eligible. The 420-c tax incentive is primarily subject to HPD approval but also

requires that a project is either owned or leased for a minimum of 30 years by a corporation, and a minimum 50% of that held by an accredited tax-exempt 501(c)(3)/(4) charitable organization for low-income housing. 420-c can also provide full tax exemption or partial tax exemption for up to a total of 60 years, assuming continuation of eligibility with rental criteria (NYC HPD, 2020).

New development and redevelopment in New York underwent a monumental shift of zoning regulations, tax-incentive programs, density favorable regulatory frameworks, and market-based economics a bit past the turn of the century. Under the leadership of Mayor Michael Bloomberg during his three-term tenure as mayor of New York City. From 2003 until 2007, the city rezoned 18% of the total available lots citywide. The majority of those underwent downzoning (86%). The same rezoning actions increased the housing unit capacity by approximately 80,000 units in specific areas (Fahim, 2010). During Bloomberg's term, the housing stock increased by over 214,000 units (Schuerman, 2013), but downsizing primarily took place in higher-income and white communities (Ibid.). The Mayor's Housing Marketplace Plan aimed to preserve 165,000 affordable housing units across New York (ANHD, 2011). Nevertheless, the density bonuses were concentrated in specific areas, while other neighborhoods lacked investment in density and affordable housing expansion (Plitt, Spivack, 2019). While wages continue to rise over the years, the city did not adequately address the affordable housing crisis to keep up with housing demand for middle and low-income residents. Mayor de Blasio's goal was and continues to be to expand and preserve the total affordable housing stock over the next ten years for all people. While Mayor Bloomberg's Housing Plan realigned many frameworks for development in NYC, the urban environment continued to shift since the de Blasio administration set forth and established the New York Housing after his election in 2014.

A Ten Year, Five Borough Plan

The de Blasio administration set forth and established the New York Housing Plan after his election in 2014. His plan's goal was not to expand the total stock of affordable housing but further assist with the upkeep and maintenance of existing affordable units (NYC Housing, 2014). The plan's overarching goal was to construct and preserve 200,000 affordable housing units under city-wide specified income band standards. The administration upped the goal of constructing and preserving 300,000 total units by 2025. The following table describes the affordability level percentage criteria.

Table 1.03: Housing Plan Area Median Income Guidelines

Income Band	AMI Percentage
Extremely Low Income	0-30%
Very Low Income	31-50%
Low Income	51-80%
Moderate Income	81-120%
Middle Income	121-165%

Data Source: NYC.gov/housing - Housing New York: A Five-Borough, Ten-Year Plan

The City initially established this affordability to dictate the median income trajectory that the expansion of the affordable housing stock would serve. Due to the Housing Plan's emphasis, primary distributions were at the extreme, very, and low-income levels.

To achieve this goal, the Housing Plan embodied a series of policies. The plan's primary components were tax abatements and exemptions to encourage affordable housing and emphasis on City-based subsidies for new and existing developments, and expansion of the Mandatory Inclusionary Housing Program. The overall plan established eight guiding principles as expressed

by the city government. Those principles summarize the need to address changing demographics, revamping old planning and policy procedures, creating economic diversity in housing development, utilizing the City's role more efficiently, preserving existent affordable housing in critical neighborhoods, protecting tenants' rights, leveraging the market demand, and increasing capital funding focused on affordable development (NYC Housing, 2014). One of the plan's main goals is to assist and aid vulnerable communities, primarily seniors and low-income residents, as part of the preservation model while also expanding new development in areas where it is not otherwise available.

The plan's intent expanded a series of affordable housing programs. The programs included many existing programs such as Mitchell-Lama, Senior Affordable Rental Apartments (SARA), Supportive Housing Loan Program (SHLP), Extremely Low and Low-Income Affordability Program (ELLA), Inclusionary Housing, Mandatory Inclusionary Housing (MIH), among others. They further revised them to target more extremely low and very low-income households and individuals. The plan further approaches tax-based incentive policies, including 421-a benefits, inclusionary housing programs, bond term, 420-c tax incentives, bond recycling, bifurcated mixed-income financing J-51 program, among others (Ibid.). A composite goal on the emphasis of a wide range of programs is to maximize the impact that every possible dollar the City has in its utilization as part of the ten-year plan. In doing so, the City can edge closer towards tackling the affordable housing crisis across the entire region.

The implementation of the plan has seen many challenges spawn during the last two terms. The general urban housing ideology has continued to shift towards a utilitarian perspective that emphasizes the need to address the many inequalities that come with a lack of affordable housing. However, building affordable housing is becoming increasingly expensive as market rates

continue to rise, vacant or government-owned land is diminishing in numbers, and rents continue to rise as wages remain stagnant (Walker, 2017).

The charts below demonstrated the share of households in NYC that are rent-burdened and severely rent-burdened, respectfully

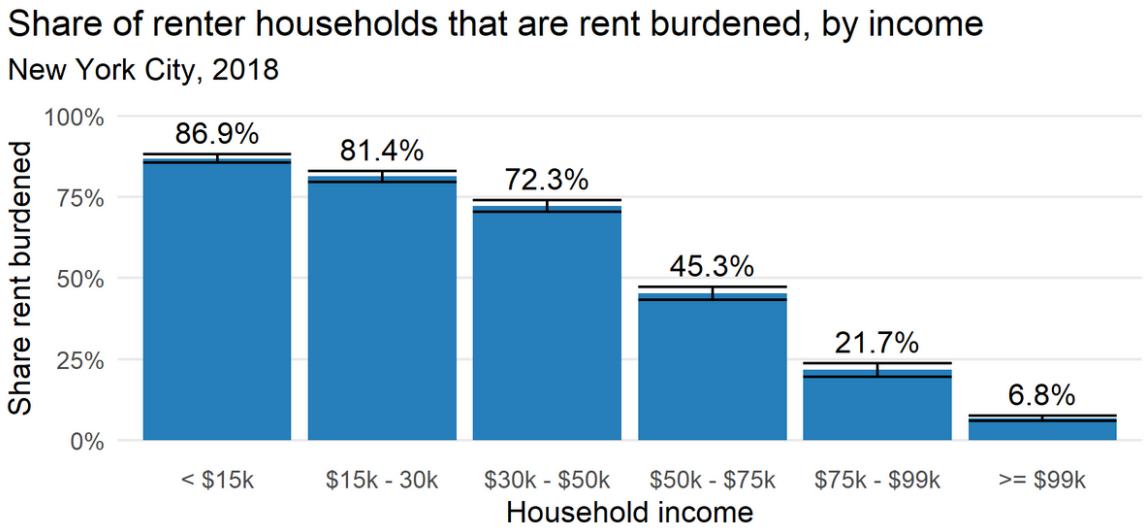


***Figure 1.07**: Share of renter households that are rent burdened, by income. NYC 2018*

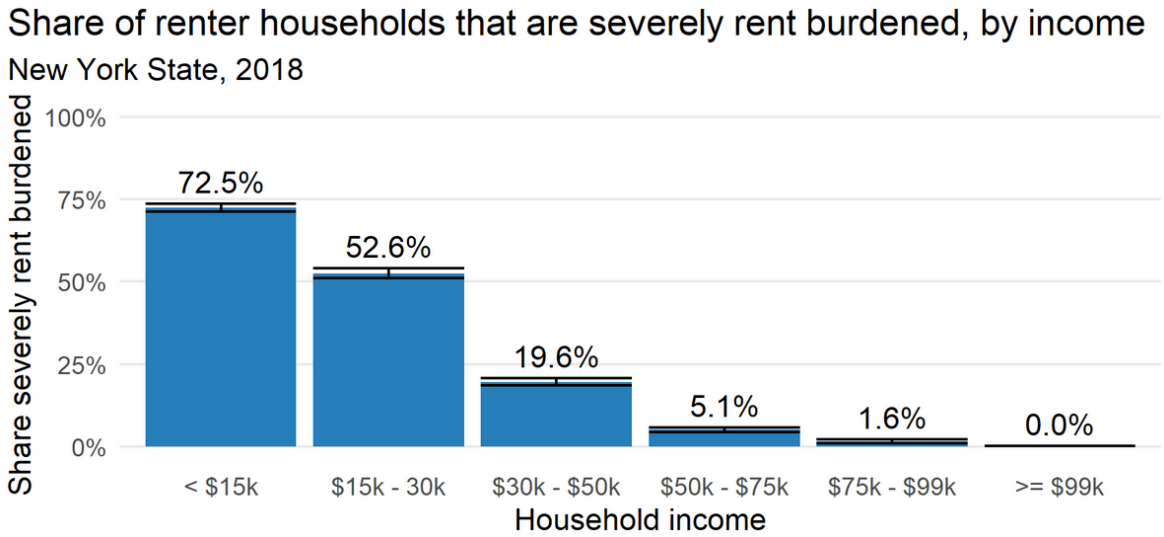


***Figure 1.08**: Share of renter households that are severely rent burdened, by income. NYC 2018*

These numbers showcase an apparent problem in NYC households being able to afford their rent without breaching over 30% or even 60% of their monthly income. We see that the rent burden is relative to household income and is seldom the case for families making over 99,000,

although that changes depending on the household size. Since New York City is facing an ongoing affordable housing crisis, the question that arises with de Blasio's Housing Plan revolves around achieving the goals presented with increasing budgetary limitations and, now with COVID-19, unprecedented crises urban development framework.

The plan's reach cannot merely aim to further the availability of affordable housing stock in the city as a whole. However, further emphasis needs to address the inequitable distribution of affordable housing in New York City neighborhoods. This is a fundamental component of the Housing Plan, but how has the administration implemented it? While the de Blasio Housing Plan has done an equitable job in preserving and creating new subsidized units, the question arises on whether the different programs have managed to distribute them equally across the city. Therefore, it is essential to look at the overall affordable housing stock change in NYC over the past few years, then comparatively align that against individual neighborhoods.

Who is affordable housing serving, and is this distribution equitable & equal?

It is also important to note the population that the currently available stock is housing and the development trends in affordable housing. On a grand scale, all people have the right to affordable and decent living standards (Freeman, 2002), and affordable housing development should, at large, aim to fulfill the gaps of affordability discrepancies across different regions. The increase of the total available, affordable housing stock, or even the preservation of such, does not necessarily fulfill the need for affordable housing across all geographies, nor across all economic levels. The establishment of the Area Median Income (AMI) levels in NYC is a direct effort towards splitting the distribution of affordable housing across multiple median household income brackets to maximize its range of affordability and the people it serves. However, the change of the AMI levels overtime does not correspond with the change in living wages for the

same households. The table below portrays the change in correspondence of AMI income bands from 2014 and 2020 as extracted from NYC.gov's public data.

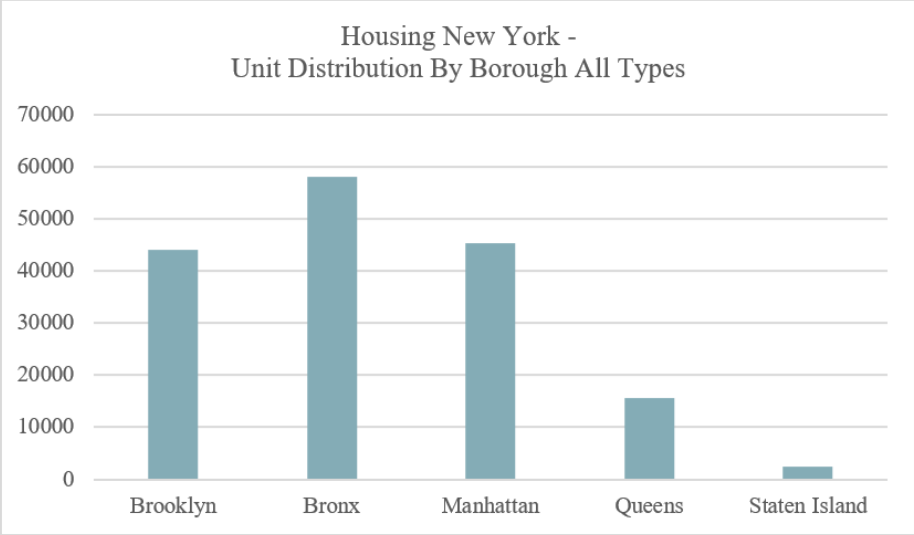
Table 1.04. Housing Plan Area Median Income Guidelines w/ 4-person Median Household Income

Income Band	AMI Percentage	Annual Income - 4 person household in 2014	Annual Income - 4 person household in 2020
Extremely Low Inco	0-30%	< $25,150	< $34,110
Very Low Income	31-50%	$25,151 - $41,950	$34,111 - $56,850
Low Income	51-80%	$41,951 - $67,120	$56,851 - $90,960
Moderate Income	81-120%	$67,121 - $100,680	$90,961 - $136,440
Middle Income	121-165%	$100,681 - $138,435	$136,441 - $187,605

Data Source: NYC.gov/housing - Housing New York: A Five-Borough, Ten-Year Plan & NYC.gov/HPD - 2020 New York City Area AMI

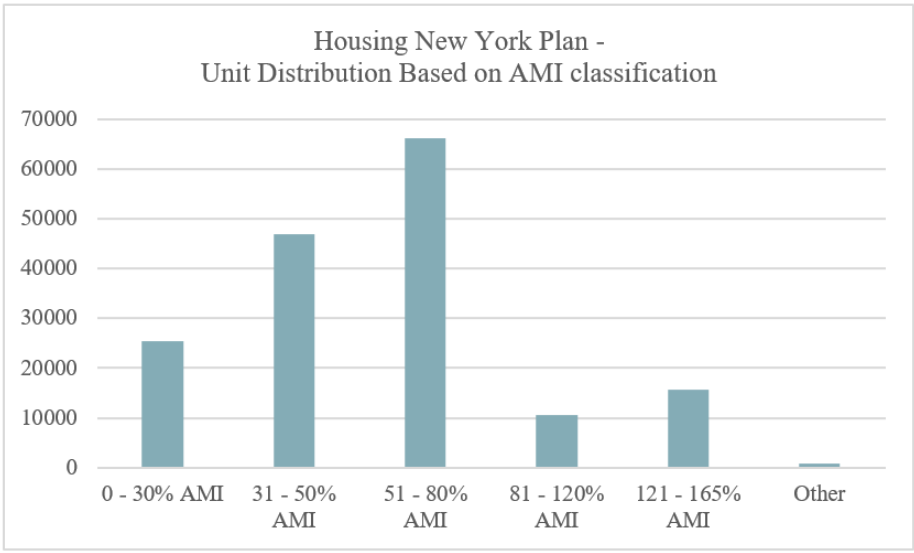
From 2014 to 2020, the average median income threshold for a four-person household increased by approximately $9,000 for the lowest income level at or below 30% of AMI. While this change indicates an increase in the applicable income base, it also questions the affordability level as a construct compared to the 6-year difference of wages. How does the increase in appropriate AMI levels correspond with the new affordability thresholds? In 2014, NYC's report on the announcement of the new Housing Plan established that close to 400,000 households making less than $41,950 (50% or lower of HUD's income limits at the time) were severely rent-burdened (paying over 50% of their monthly income towards rent) (NYC Housing, 2014). This number steadily increased over the years and has continued to do so today. However, it does not describe the situation of all neighborhoods in NYC. The generalization of affordable housing availability can skew our understanding of its actual distribution amongst households and communities that need it or the distribution inequalities amongst different AMI band thresholds. What variables dictate the development of affordable housing or the preservation of units across different neighborhoods? More specifically, where are the available, affordable housing units located, and how has that changed over time? From 2014 and to date, 165,590 affordable housing

units were newly constructed and preserved, at 31% and 69% of the total, respectively. The graphs below paint a picture of the total stock distribution amongst different boroughs and AMI threshold bands, respectively, as part of Housing New York from 2014, the beginning of the program, to today.



Data Source: NYC Housing, Housing New York by the Numbers through 6/30/2020

Figure 1.09: *Housing New York – Unit Distribution by Borough for all types*



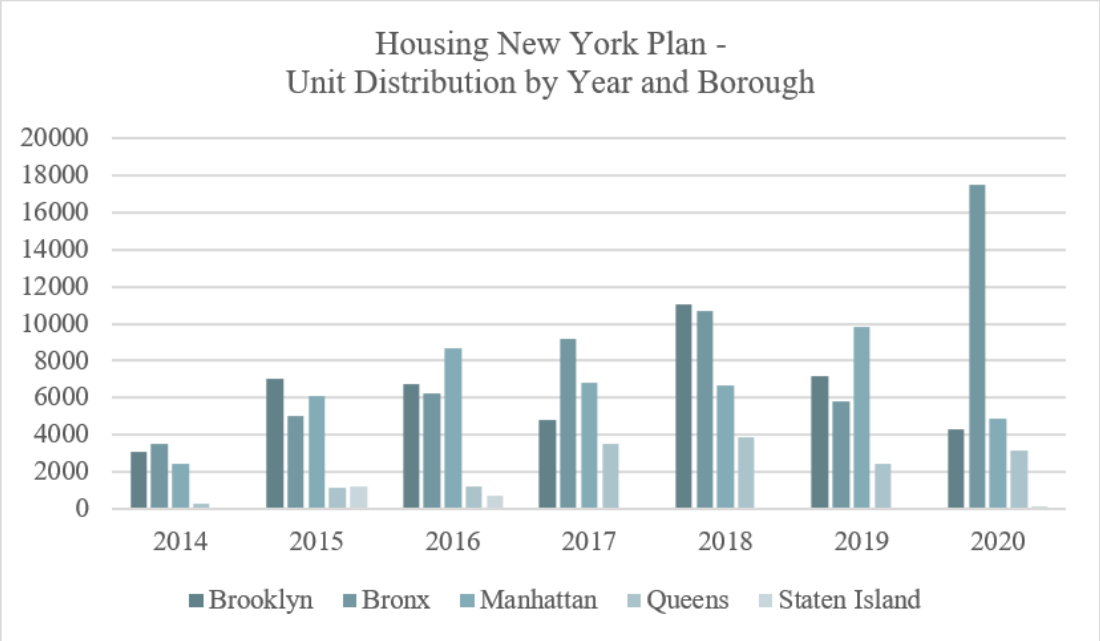
Data Source: NYC Housing, Housing New York by the Numbers through 6/30/2020

Figure 1.10: *Housing New York – Unit Distribution based on AMI classification*

These numbers depicture two things. Primary emphasis has fallen in line with the goals of de Blasio's affordable housing plan, which focuses on the new construction and preservation of

extremely low, very low, and low-income housing AMI thresholds. Distribution of the affordable housing stock has taken place primarily in the Bronx, Brooklyn, and Manhattan, with Queens and Staten Island experiencing a significantly reduced number of affordable housing units over the last six years. This distinction alone does not, however, explain the disparity issue as geographically imposed. Many zoning restrictions and regulations take place on the smaller neighborhood and community district level. The distribution of affordable housing should, ideally, aim to address the lack of such in all areas in which it completely lacks or is urgently needed.

The graph below showcases the different development patterns for units classified under Housing New York by looking at the development patterns over the years, from 2014, up until the latest available data on 6/30/20, and classifying them by their respective borough.



Data Source: NYC Housing, Housing New York by the Numbers through 6/30/2020

Figure 1.11: *Housing New York – Unit Distribution by Year and Borough*

In this case, this graph showcases the split of development patterns over the years since de Blasio came into office and the Housing New York plan began. In this case, we see a relatively steady growth pattern of development between the years, although there is no apparent direction

in terms of development changes when looked at by borough from year to year. The administration has emphasized new construction and preservation of units in Brooklyn, the Bronx, and Manhattan. However, the changes over the years seem not to follow an equally directional pattern across boroughs that can be inferred by this graph. In terms of fulfilling the promise set forth by the Housing New York plan, to expand the preservation and new construction of affordable housing units equally and equitably across the different boroughs, the plan falls conventionally off. In regards to its real efficacy, the research forward aims to understand it better. The methodology aims to analyze the distribution of affordable housing under the Housing New York plan, and ultimately whether the expansion of affordable housing is genuinely equitable or done to benefit all residents.

Research conducted by the New York City Independent Budget Office raises two concerns. One, financing affordable housing only in neighborhoods where the local residents' median household income represents the local community, brings up questions of racial, economic, and ethnic inequalities in cluster concentrations. The second concern is that financing affordable housing in higher-income neighborhoods prices out lower-income families from moving and living there. This limits their possibility of moving into an area where market rates would be higher than their existing neighborhood, creating a form of forced spatial segregation (NYC IBO, 2019). Further research indicates that most of the city subsidizes most affordable housing in neighborhoods where the residents qualify for the very low or low-income housing brackets, but not less for moderate and high-income thresholds. However, over half of the financed projects are in neighborhoods where the typical household would earn above the threshold to qualify. A quarter is in neighborhoods where households do not make enough to qualify.

On the other hand, there is research about the impact of Fair Housing and gentrification being a positive factor for economic and social integration in previously disinvested areas (Ellen, Torrats-Espinosa, 2008). However, the same research shows that previously predominantly minority neighborhoods are slowly transitioning to predominantly white. As such, integrating new housing above the qualifying bracket for residents can be argued from both perspectives. However, for the remaining stock for the affordable housing units found in middle-income neighborhoods, lower-income families would seldom qualify. For affordable housing development in higher-income neighborhoods, the thresholds only cater to middle-income levels highest applicable affordability bracket (Ibid.). This classification is crucial as it showcases a more significant social mobility for higher-income people to qualify in lower-income areas, but not vice versa.

However, to study the affordable housing discrepancies across all of NYC would require an individual analysis of multiple factors. One would have to study all applicable affordable housing programs to construct and preserve affordable housing units at first. Their timeframe of construction and local and state zoning and policy changed over the past fifty years and how they differ between neighborhoods. Tax credit programs generally serve a small percentage of the population and are thus not entirely indicative of NYC's investment patterns. Focus solely on AMI bracket classification does not take into account the overall narrative of affordable housing. However, it is still a good indicator of the existing gap between AMI classifications. The median income in the area and how well it relates to it is considered one part of this paper's analysis.

Furthermore, this paper aims to collect composite affordable housing unit information in NYC and compare it to three socioeconomically different Brooklyn neighborhoods to conclude the equitable applicability of affordable housing units in small geographies and neighborhood contexts. The next component of the research analyzes local zoning regulations and land

availability in the neighborhoods and how they relate as case studies to NYC's overall landscape and program trajectory and ultimately how the Housing New York program has adopted that pattern. Lastly, it asks whether its applicability is genuinely equal and equitable and directed so that it focuses on the equitable living of New Yorkers across the spectrum.

Neighborhood Zoning

Bensonhurst

The existing zoning regulations in Bensonhurst are primarily classified as R5, with some areas in East Bensonhurst having fluctuating zoning regulations between different blocks, ranging primarily from R4-1 to R5. There are additionally a few C4-2 and C4-3 commercial districts located between bay Parkway Avenue and 65th Street on the northwest side of the neighborhood (NYC Zola)

R5 density allows for a floor area ratio (FAR) of 1.25 and primarily via short height builds, mostly three and four-story attached housing and small apartment housing. R5 zoning generally allows for single, two-family, and multifamily zoning with low height and a maximum lot coverage of 55%. The picture below portrays a typical development outlook for R5 zoning. (NYC Planning – Residence Districts).

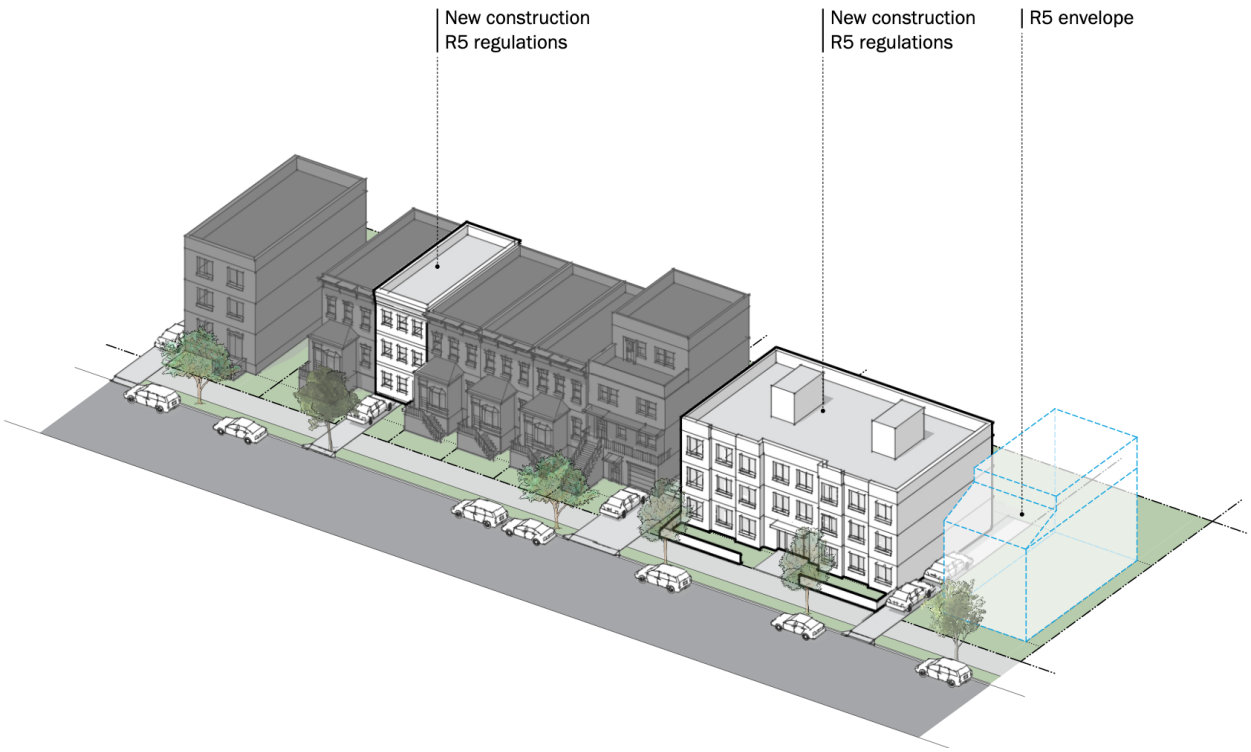


Figure 1.12: *Typical development guidelines for R5 zoning.*

Bensonhurst's zoning history is of particular interest in this case. Local zoning resolutions help us understand some development patterns around affordable housing or the ability to build in the area in the first place. In July of 2005, approximately five months after the ULURP procedure was certified by the Department of City Planning, the Council voted to down-zone 120 blocks in Bensonhurst after residents expressed concerns about the development of multi-family units replacing single-family homes (CityLand, 2005). The zoning map for Bensonhurst is before the 2005 rezoning is below (Bensonhurst Neighborhood Zoning Profile).

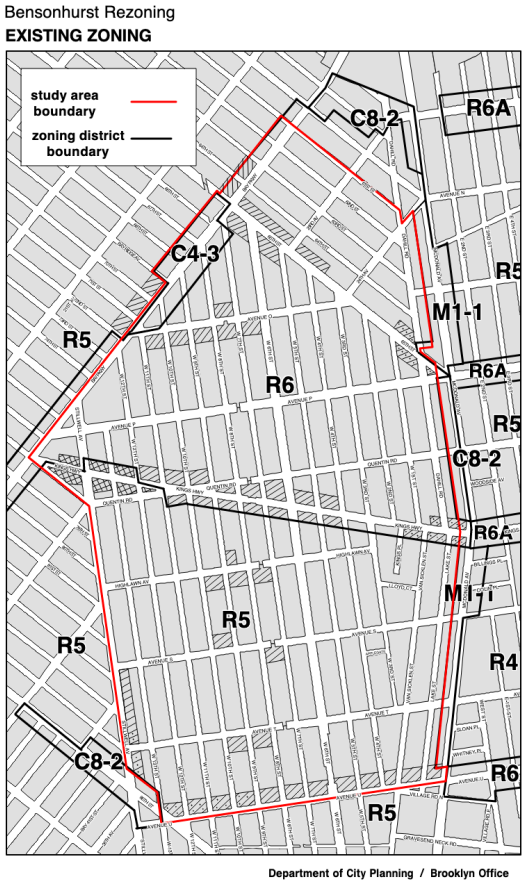


Figure 1.13: *Bensonhurst zoning districts pre-2005 down-zoning process.*

Before the down-zoning that took place, the southern half of Bensonhurst was for R6 residential zoning. After the ULURP process in 2005, the city rezoned the vast majority of those blocks from R6 to R5, which effectively shut down the possibility for medium-density multifamily

development that would be built “as of right.” As an indicator, it showcases a local disdain for expansion of the residential market and a general push for maintaining low-density and single-family zoning in the area, or just not expanding the overall market as a whole.

Borough Park

Borough Park is zoned with a mixture of R5 and R6 districts, although the vast dominant zoning classification is R6. Some light manufacturing districts on the north strip of the neighborhood are found right below the park. Additionally, there are also some commercial overlays between a few blocks, classified at C3-4.

R6 zoning, on the other hand, allows for the development of medium-density residential in many areas of Brooklyn, Queens, and the Bronx. R6 zoning has a FAR, which ranges from 0.78 in single-story buildings to 2.43 for approximately a height of 13 stories. However, a developer can boost the allocated FAR depending on whether the lot is within transit zones or if development qualifies as Quality Housing, which would allow for a higher lot coverage for buildings that participate in the Inclusionary Housing Program provide other neighborhood community services. The picture below portrays a typical development outlook for R6 zoning.

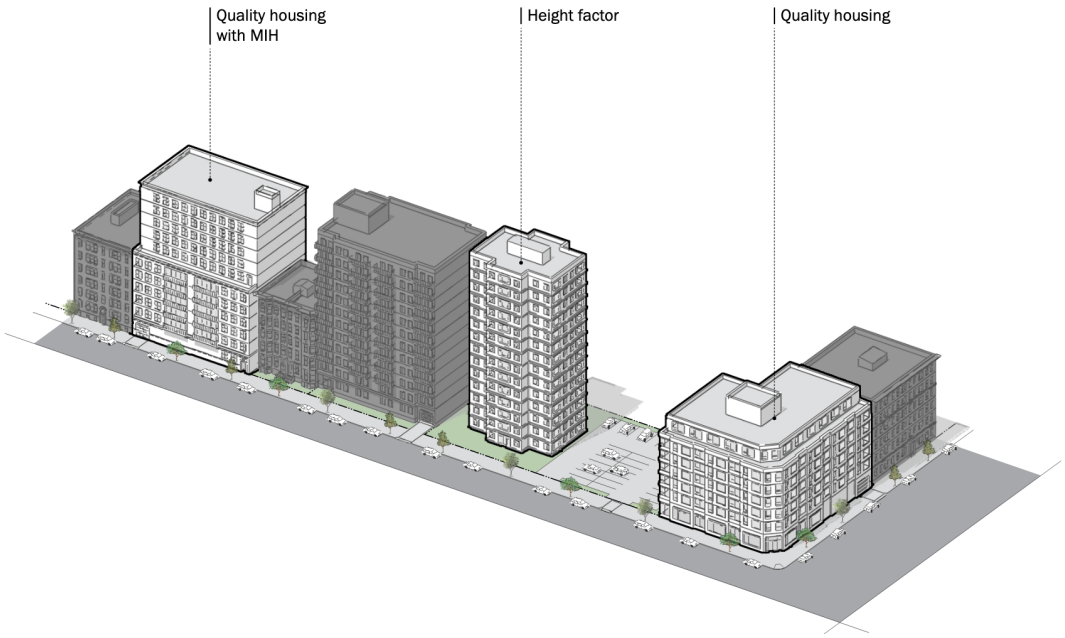


Figure 1.14: *Typical development guidelines for R6 zoning.*

The building heights for necessary R6 zoning cap at a max of 55 feet on narrow streets, and 70 feet on wide streets, while development height can be expanded to 115 feet if it is inclusionary housing. This allows developers to decide on their configurations of a building's structure and appropriately develop different buildings with different height regulations.

Brownsville

The zoning in Brownsville is similar to that of Borough Park, the vast majority zoned for R6 zoning. Brownsville public housing makes up over 23% of the neighborhood's total housing stock, and that does not include any other subsidized buildings or units in the area.

Locally, the Brownsville community council has resisted the expansion of new market-driven demand to keep gentrification at bay (Nicholas, 2019). However, this has created a general lack of investment in infrastructure, streets, and developments. While in the early stages of Brownsville, the area housed Jewish descent residents primarily; the area slowly began transitioning to predominantly black during the 1940s. Under the leadership of Robert Moses. He purposefully relocated many residents towards public housing in the area developed there at the time (Ibid.). On the other hand, the East New York rezoning process encompasses possible changes in Brownsville's neighborhood, as showcased in the Brownsville Plan (NYC HPD).

The Brownsville Plan is a composite, community-driven response in creating over 2,500 new affordable homes in the area on city-owned land. The process aims to do so by developing "as of right" R6 zoning for the most part. However, some developers in the area have pushed for zoning amendments to expand further affordable housing development possibilities past current limitations (Morris, 2020).

In general, Brownsville's zoning supports affordable housing development as there are a continuous push and demand for affordable housing in the area and availability of city-owned land to build on, which is not necessarily the case in the two neighborhoods described before.

Ultimately, the zoning regulations in each neighborhood positively contribute to the expansion of affordable development across NYC. There are differences that are important between each individual neighborhood, however. We see that Brownsville and Borough Park find themselves in a more advantageous zoning district than Bensonhurst, one that would allow for the development of medium-density residential housing, and affordable housing in particular. Neither of those regions have underwent down-zoning procedures to reduce building capacity. On the other hand, Bensonhurst specifically down-zoned during 2005, making it harder to build medium-density affordable housing in particular. This took place after local council push to maintain the area as is without the addition of new medium-density housing. In both Bensonhurst and Borough Park, there is no presence of public housing build by the city, and very little distribution of units that allow for Section 8 vouchers. Furthermore, Brownsville has a larger percentage of government-owned and available land to develop affordable housing, which is not the case with the other two neighborhoods. This is important to keep in mind as we continue further with the analysis of the paper.

Research Design

This paper's research design approach focuses on the geographic distribution of spatial disparities in affordable housing in three diverse Brooklyn neighborhoods. The three neighborhoods that will be analyzed are Bensonhurst, Borough Park, and Brownsville, and subsequently placed against overall Brooklyn and NYC statistics.

The approach of research will aim to address two main research questions. Who is affordable housing development serving? Is this distribution of affordable housing equitable and equal? These two fundamental questions aim to shed light on geographically narrowed perspectives of communities and neighborhoods in NYC. The paper aims not to only point out the spatial distribution across all boroughs in NYC, but to compare it to overall trends over the years in these specific neighborhoods to shape a public image around the disparities in place.

To achieve this, an analysis of three general variables will take place. The distribution of subsidized unit shares in comparison to the total housing stock per census tract, negative and positive gap barriers between the Area Median Income (AMI) classification, and the median income per household of different sizes, and the progression of development of preserved and new construction units since Mayor de Blasio's Housing Plan began in 2014, more specifically, how it distributes across different boroughs and neighborhoods.

The second component of analysis will emphasize mapping out the gross median household income and gross median rent comparisons across the three neighborhoods. This will further be applied to analyze the applicability of severe rent burden in the three neighborhoods and how that stacks against the total affordable housing stock availability.

The third component involves comparing the data as mentioned above to statistical differences in the three case study neighborhoods and their availability of affordable housing units in order to outline possible discrepancies in distribution, if applicable. From there, the discussion will present

overall comparisons back to NYC's general statistics as a whole and the developments that have taken place since Mayor de Blasio took office in 2013.

Post analysis, emphasis will be placed on discussing the geographical mishaps of affordable housing development in New York, identifying possibilities of forced urban development, and directing the spatial implementation of affordable housing based on market conditions. This paper's concluding discourse aims to expand the discussion on the efficacy of market-based driven affordable housing development and how the continuation of the current policies in place will work towards tackling the affordability crisis over time.

Ultimately, this thesis aimed to discuss the following two questions, geared around statistical data and geographic distribution of affordable housing indicators.

1. *Who does it serve?*
2. *Is this distribution equitable?*

Neighborhood Case Study Approach

To understand the expansion and preservation of affordable housing development on a smaller geographic scale, this study compares three neighborhoods in Brooklyn and their affordable housing development patterns compared to overall Brooklyn and NYC trends. The study area is Brooklyn generally due to its diverse socio-demographic makeup compared to other clustered areas of Manhattan and the Bronx, the other two boroughs with the most significant affordable housing presence as a total. Bensonhurst, Borough Park, and Brownsville's three neighborhoods were picked based on their demographic makeup and poverty rates. The goal was to focus on neighborhoods with a divergent racial makeup and comparable poverty rates. The analysis of neighborhoods is not in direct statistical autocorrelation of this criteria, but these are the variables used to focus on different study areas.

Bensonhurst has a diverse racial makeup, with 40.9% of the total population identifying as Asian in 2018, up from 23.1% in 2000, 17.1% identifying as Hispanic, up from 8.8% in 2000, and 37.1% identifying as white in 2018, versus 64.7% in 2000, while only having 1.0% of its total population estimate identifying as Black in 2018, up from 0.4% in 2000. Over the years, Bensonhurst jumped up the NYC neighborhood diversity ranks from the 34th to 14th ranking. The total area population is 186,850 in 2018, up from 171,778 in 2000. The overall poverty rate for Bensonhurst was 20.0% in 2018, above the average of 17.3% citywide, and 19.0% in Brooklyn (NYU Furman - NYC Housing & Neighborhoods - BK 11, 2020).

Borough Park, on the other hand, has a less diverse racial makeup and has steadily, over the years, lose ranks and dropped from 40th in 2000 to 52nd in 2018 in the citywide racial diversity index. The total population of Borough Park was 138,570 in 2018, down from 158,548 in 2000. However, the population grew from 2000 to 2010, recording at 168,915 total. Between 2010 and 2018, the population of Borough Park decreased by over thirty thousand people. Its geographic

makeup is primarily white and has climbed slowly and steadily over the years, recorded at 73.6% in 2018, versus 70.8% in 2000. 14% of the total residents identify as Asian in 2018, up from 11.2% in 2000. The percentage of people who identify as Black and Hispanic has gone down in both cases, going from 2.8% to 2.0% and 10.7% to 9.4% for both racial groups, respectively, from 2000 to 2018. Borough Parks poverty rate, however, is higher than Bensonhurst and records at 27.8%, in comparison to 19.0% in Brooklyn, and 17.3% citywide, making it the 12th most poverty-stricken neighborhood in NYC, based on monthly income to rent ratios. (NYU Furman - NYC Housing & Neighborhoods - BK 12, 2020).

In Brownsville, the population has slowly increased over the years, recorded at 116,790 total residents in 2000 versus 122,128 in 2018. On a racial diversity index, the neighborhood ranks close to Borough Park, coming just three spots earlier as 49th, with the population not having seen many demographic changes over the years. In 2000, 75.9% of the total population identified as Black compared to 70.0% in 2018, a slight decrease. In 2000, 20.4% of the population identified as Hispanic, compared to a twenty point percentage increase to 25.5% in 2018. Asian population changed from 0.6% to 0.7% from 2000 to 2018, respectively, and the percentage of the white population more than tripled from 0.7% in 2000 to 2.4% in 2018. While having opposite population demographics but similar diversity index rankings with Borough Park, Brownsville has the same poverty rate percentage at 27.8% neighborhood-wide in 2018, both of which are higher than Bensonhurst's 20% (NYU Furman - NYC Housing & Neighborhoods - BK 16, 2020).

This comparison will be to study the discrepancies of affordable housing distribution as they pertain to overall NYC statistics, and between them as well. Due to the similar economic but divergent demographic distributions, the three neighborhoods represent three diverse communities, coming from different backgrounds and clustered in specific geographic areas.

Therefore, the applicability of affordable housing in each area can help understand the extent of state efforts for equitable living in each situation. Of course, that is not to say that an area with an abundance of affordable housing is necessarily the one served in the best manner, a concept that we look into in further detail.

The need for a balance of affordable housing in NYC and the idea is that affordable housing should be equally available to everyone. The city should make all efforts to create an even distribution of such. However, the reality of the urban landscape in NYC is that there is already an established urban footprint in place, and as time passes, there is less availability of land to build on. The affordable housing landscape is already extensive, but that does not mean that it ensures units' affordability indefinitely in each neighborhood. Today, many of the affordable housing developments also fail to continue serving affordability levels needed in the area, therefore gradually diminishing the truly affordable housing stock available to local residents over time.

On the other hand, the uneven distribution of affordable housing from one neighborhood to the other could contribute to the limitation of employment opportunities, educational services, and economic expansion in one neighborhood versus another. Furthermore, the expansion of affordable housing allows residents to have the opportunity to live in different areas and expand their local neighborhood network, actively establishing a more diverse employment and living pool, promoting cultural diversity and economic development. Ultimately, more affordable housing in all neighborhoods would be an optimal solution. However, place-defined interventions can help alleviate many living issues and discrepancies from neighborhood to neighborhood, promote cultural and economic diversity, and incentivize development equally across the urban framework of NYC.

Methodology & Data

This paper's methodological approach combines the use of statistical and numerical data for the analysis of spatial distributions of affordable housing stock in NYC and a subsequent three selected neighborhoods. The method of approach does not focus on a single affordable housing policy. There is a general lack of available empirical data that could dictate affordable housing units' directional implementation across different political spectrums and policy timelines. Instead, the paper focuses on the availability of affordable housing units as a whole, their spatial distribution across NYC, and the three applicable neighborhoods of study.

The analysis utilizes a fundamental principle discussed by Vincent Reina and Michael Williams for the Furman Center for Real Estate and Urban Policy. It layered data for a most accurate and comprehensive approach to affordable housing unit availability and development (Reina, Williams, 2012). The two organizations joined forces to create the Subsidized Housing Information Project (SHIP) database to catalog a composite picture of publicly subsidized and privately-owned affordable housing. The database includes units that fall under HUD project-based rental assistance, NYC & Mitchell-Lama, and LIHTC. This database's utilization offers multiple advantages because it layers series of datasets to create a generalist image of the urban landscape in question. Using the SHIP database is more straightforward, as it eliminates the affordable housing units that might log twice if they received a combination of government and state programs. Taking the properties as individual programs will significantly skew results. Multiple subsidy program utilization can showcase the same unit once in each dataset, but multiple times, one combines all the data. This study further reinforces the notion of accounting for affordable housing unit stock as a composite, as it found that more than 50 percent of properties receiving HUD project-based rental assistance have also been the recipient of an additional

program (Ibid.). The use of layered data also assists with the automated distinction of projects that continue to subsidize rents even though they are no longer part of some of the original financing programs. Ultimately, the approach utilizes pooled housing data due to their ability to provide locally-based indicators of change over time, assisting with further research in tackling spatial disparities of affordable housing in specific geographic locations in NYC.

The primary datasets utilized in the analysis component of this paper are extracted through three primary databases. US Census Data, the Furman Center Open Core Data, and NYC Open Data.

US Census Data:

1. ACS 5 Year Estimates – NYC Boroughs Census Tracts
2. ACS 5 Year Estimates – Housing Unit Count 2018
3. ACS 5-Year Estimate Median Income in the Past 12 Months - 2018
4. ACS 5-Year Estimate Poverty Status in the Past 12 Months - 2018

NYU Furman Center Coredata.nyc

1. Subsidized Housing Information Project (SHIP) Core Data
2. Median Household Income by Census Tract 2014 – 2018

NYC Open Data

1. NYC Census Tracts – 2010
2. NYC Housing New York Units by Building
3. Public Use Microdata Areas (PUMA)

The analysis of the paper will focus on primarily on drawing conclusions across the geographic distribution of affordable housing in NYC as a whole, and how it compares to the availability of affordable housing units in the neighborhoods of Bensonhurst, Borough Park, and Brownsville. As such, heavy reliance will take place into analyzing the different variables present in each

neighborhood and how they compare to overall statistics in NYC. The methodological analysis is expected to yield and showcase the following results and rooms for comparison:

1. *Share of distribution of affordable housing units per neighborhood in comparison to overall NYC statistics.*
    a. For this approach, a map of the overall affordable housing development in NYC will be generated utilizing the NYU Furman Center for Real Estate and Urban Policy SHIP database. In turn, the three case study neighborhoods will be isolated and individually and the affordable housing unit stock will be analyzed as well. Overall comparisons will take place across the three neighborhoods and NYC to see the percentage difference of market rate housing units and affordable housing units as they pertain to NYC, Bensonhurst, Borough Park, and Brownsville.

2. *Average Household Income versus AMI classifications*
    a. The second component of analysis will compare together the average median household income of each neighborhood in question versus NYC as a whole, and the AMI threshold bands put in place by the de Blasio administration. This will be calculated using the NYC Open Data Public use Microdata Areas (PUMAs) to establish the neighborhood clusters, and overlayed with the ACS 5 Year Estimates of Median Household Income from 2014 to 2018. This analysis aims to signify the difference between the established AMI bands for affordability qualification, and the actual median household income of each census tract in the selected neighborhoods. This aims to understand whether or not development in the area is hindered or influenced by higher than standard median household income in comparison to the applicable affordability band. This will use city of New York data for Housing New York units by affordability band distribution for the years

2014 to 2020. It will be isolated per household size in four different levels, and compared to median household incomes in the neighborhoods to understand where the majority of affordable housing developments fall into, and whether their service is for people within the community that can qualify, or if discrepancies exist.

3. *Housing New York Development Patterns by Neighborhood*
    a. Utilizing the database provided through the NYC Open Data portal and the Department of Housing Preservation and Development (HPD), a statistical analysis will be conducted analyzing the distribution of affordable housing units, only from 2014 to 2020, and under the Housing New York program. This series of datasets will produce a statistical analysis of the distribution of units in overall NYC and the three neighborhoods in question. Statistical comparisons will take place across the three neighborhoods in order to understand the impact of the Housing New York plan on a smaller geographic scale This will paint an image of the efficacy of the Housing New York trajectory as it applies to the overall plan of creating and preserving affordable housing units equitably across New York City. Primarily, this analysis will be used to find the clustered concentrations of preservation or new construction efforts, if any, and point out obvious continuations of spatial disparity.

Data Limitations

The data utilized in this study uses a combination of federal, state, and private sources gathered from accredited data portals, such as the NYU Furman Center for Urban Studies, NYC Open Data, and the US Census New American Factfinder. However, the utilization of data is bound to some geographic boundaries and aggregated data and pooled sources to create composite databases of affordable housing unit distributions and collectives.

Analysis Variable #1: Share of distribution of affordable housing units per neighborhood in comparison to overall NYC statistics

This analysis will use Subsidized Housing Information Project (SHIP) data, as part of NYU Furman Center's database, explicitly created for affordable housing, initially released in 2011, and actively updated over the years. The dataset is part of Coredata.nyc, the composite datahub of NYC housing and neighborhood statistics. The data derived from the SHIP database comes to an aggregated extent. It includes all active subsidized properties in NYC, the type of subsidy, the combination of multiple subsidies, and the beginning and end dates similarly. This database's pool brings together privately owned and publicly owned buildings, which helps paint a more accurate image of the affordable housing landscape.

However, the database excludes many units and buildings that have been funded through programs and initiatives that are not part of the SHIP database and are thus not taken into account in this study. Those units could form a significant composite of additional affordable housing units that were not accounted for. However, research on their applicability and extent has not taken place as part of this study. Those programs include, but are not limited to, Housing+, Neighborhood Construction Program (NCP), Neighborhood Pillars, Open Door Program, Senior Affordable Rental Apartments Program (SARA), the 80/20 Financing Program, and many more programs that range from tax incentives for preservation and new construction to housing and historic preservation, and directed affordability programs for vulnerable communities. As such, the SHIP database, although it represents the greatest collective of data on affordable housing units and their distribution in NYC, falls short in including all applicable units in the count. However, this paper does not assume full affordability across all building types and different properties included in the SHIP database. Therefore, the methodology utilizes a by-unit basis to limit exonerated numbers regarding developments that only offer a portion of their units at affordable levels. it utilizes

datasets of only buildings that have attribute values that contain both the total residential units applicable and the total units currently receiving subsidies. This creates a more appropriate landscape image of subsidized housing units in NYC and does not consider any residential units in new construction or preservation that are now at the market level.

The programs included in this dataset include New York Public Housing Authority (NYCHA) units, Mitchell-Lama projects, Section 8 and Housing Voucher Program units, Rent Regulation units, LIHTC subsidy recipient projects, HUD mortgage and insurance units, and 421-a tax incentive project recipients. The database does not consider properties and units that have by 2019 opted out of subsidy qualifications and is further limited to only subsidized units within the greater residential unit count per building.

Analysis Variable #2: Average Household Income versus AMI classifications

In comparing *Average Household Income versus AMI classifications* on a neighborhood level, there are a series of limitations to be taken into account in terms of data interpretation and portrayal. The datasets used are the NYC Open Data Public Use Microdata Areas (PUMAs) as the geographic boundaries for analysis because they represent the respective 56 neighborhoods of NYC as described and analyzed in this paper, and the ACS 5 Year Estimates of Median Household Income from 2014 to 2018. This analysis splits the AMI classification levels in the predominant household sizes and thus approaches this study through a four-part mapping analysis of 2-person, 3-person, 4-person, and 5-person households. As such, this dataset excludes the analysis component of 1-person households and 6-person and 7-person households. The reasoning for such is the applicability of 1-person, 6-person, and 7-person households is limited in the three neighborhoods in question and is thus not analyzed.

Analysis Variable #3: Housing New York Development Patterns by Neighborhood

In the last component of the analysis, the variable will consider the only SHIP classified data and only properties that fall under the Housing New York Plan and sourced by the NYC Open Data Housing New York Units by Building dataset. While the Housing New York database only includes 4,656 developments, it maintains a distribution mechanism to classify the different affordability levels per unit (Extremely low, very low, low, moderate, middle, other income). This data is useful when isolating the three neighborhoods in question and looking at their statistics of new development and preservation, their affordability band, and how it compares to the median household income in the neighborhood. However, this component study does not take into account the affordability per unit distribution of any developments having taken place before 2014, or when Mayor de Blasio took office. Therefore, this limitation means that the affordability band development for any properties having undergone preservation construction or new construction before 2014 will not be analyzed. An additional limitation with the Housing New York dataset is the confidentiality factor for multiple buildings, thus the limited data availability for those buildings. 1066 out of the total of 4565 building records in the database are either confidential or lacking all applicable data points, limiting the extent to which we can extract information of the AMI levels and locational proximity.

Results & Discussion

Analysis #1

As disclosed in the previous section, the statistical and geographic data presented in this section is bound to the dataset limitations from the data sourcing and extraction procedures—the NYU Furman Center SHIP database, extracted from CoredData.nyc is the primary dataset source utilized for this analysis. Thus, it does not represent the full range of affordable programs present in NYC, and therefore not all affordable or subsidized housing units. However, the Furman Center also maintains a more detailed subsidized housing unit breakdown. Therefore the estimates presented in this study are a more appropriate configuration of the affordable housing landscape. They consider the distribution of total residential versus affordable residential units instead of assuming a 100% affordability qualification across the spectrum.

Table 2.01: Distribution of Total Housing & Subsidized Units in NYC - 2018

	New York City	Brooklyn	Bronx	Manhattan	Queens	Staten Island
Total Housing Units	3,519,450	1,053,670	532,509	886,282	865,809	181,186
Total Subsidized Units	837,615	281,098	212,943	273,770	54,072	15,732
Subsidized Units as Percent Total of All NYC Housing Units	23.80%	7.99%	6.05%	7.78%	1.54%	0.45%
Subsidized Units as Percent Total of All NYC Subsidized Housing Units	100%	33.56%	25.42%	32.68%	6.46%	1.88%
Subsidized Units as Percent Total of Borough Specific Housing Units	23.80%	26.68%	39.99%	30.89%	6.25%	8.68%

Data Source: NYU Furman Center, coredata.nyc.

Affordable housing development in all NYC boroughs grew in the recent years, following the Housing New York plan set in place by the de Blasio administration. The subsidized housing landscape in 2019, as extracted by the NYU Furman Center Core data and compared against American Community Survey 5-year Estimates, showcases that Brooklyn has the greatest

concentration of subsidized housing units in NYC in comparison to the rest of the boroughs, having 33.56% of the total subsidized housing units between the five boroughs of NYC. Brooklyn, Manhattan, and the Bronx make up more than 90% of the total subsidized housing units studied that are active in NYC as of 2019, as subsidized units for the whole of NYC comprise 23.80% of the total housing market in NYC. Queens and Staten Island comprise the remainder of the affordable housing landscape at 6.46% and 1.88%. When looking at the data compared to borough specific housing landscapes, Bronx has the greatest concentration compared to its total housing unit count, at 39.99% of the total units. Manhattan is second, while Brooklyn has 26.68% of its total housing units currently subsidized based on the comparison between the subsidized units from the SHIP database against the ACS 5-year estimates of total housing units by census tract.

The map on the following page presents the subsidized unit share in comparison to the total housing units, aggregated by census tract for all of NYC, and split by defined intervals of subsidized unit share ranging in 20% intervals, except the first interval which describes the subsidized unit share from 0% to 5%. The majority of census tracts with subsidized housing units only have up to 5% of the total unit share. Therefore, it is vital to make that distinction on a spatial scale to defer from aggregating the data to the extent that makes the graduated color map inaccurately descriptive.

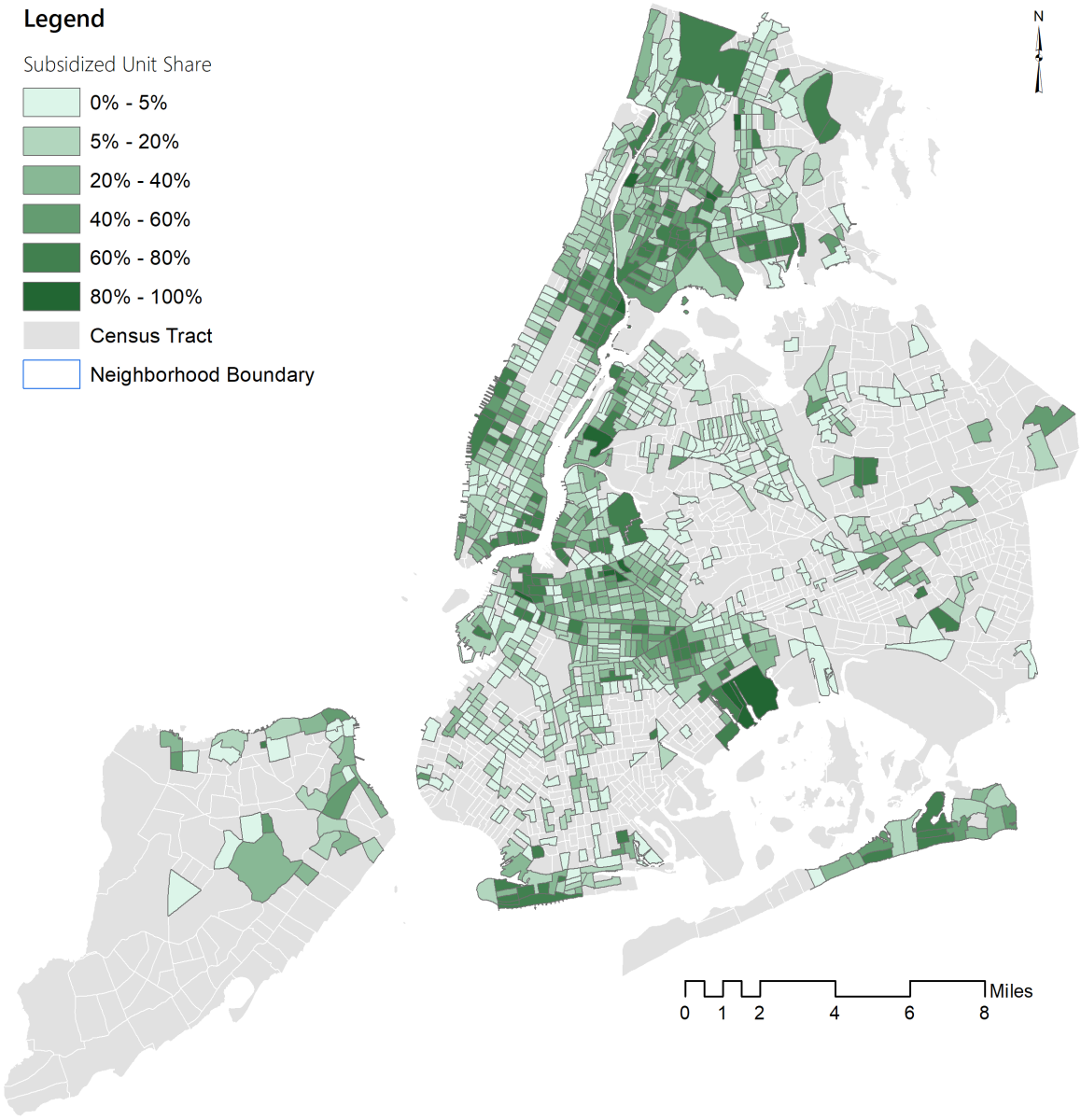


Figure 2.01: *Subsidized Unit Share in comparison to total unit share per census tract in NYC.*

Figure 2.01 depicts the distribution of subsidized housing in all of NYC, and split by census tract. This map shows that the majority of census tracts have less than 20% of their total housing unit share classified as currently receiving a subsidy, based on NYU Furman Center data. The few neighborhoods which have a greater concentration of affordable housing are found in the Northwest area of Brooklyn, East Harlem, Hudson Yards & Hell's Kitchen in Manhattan, and spatially distributed between the neighborhoods of Melrose, Morrisania, Soundview, and Eastchester in the Bronx.

Some spatial configurations are worth pointing out in this case, as the data was aggregated by census tract, and can appear skewed to a certain level. The largest census tract in the Bronx, which shows a subsidized unit share of over 80%, is primarily constituted of Van Cortlandt Park. However, in 2017, there was new construction of a small building in the area built using Low Income Housing Tax Credits, with over 60% of the units qualifying for subsidies. This cluster of new developments also makes up the vast majority of housing units in this census tract. It is, therefore, indicative of the real applicability of subsidies in the area.

On the other hand, the census tract in Eastchester and over 60% of its total unit share classifying as subsidized housing units indicates Co-Op City. Co-Op City is a cooperative housing development finalized in 1973, which makes up the vast spatial majority of the census tract physical footprint. It contains the majority of total housing units in the area. In Brooklyn, on the other hand, the census tract found on the Northwest portion of the borough showcasing over 80% of subsidized units total for the census tract, is primarily comprised of the Shirley Chisholm State Park and is similar to the Bronx census tract. A cluster of developments brought over 700 subsidized units in the area after their completion in 2018.

Table 2.02: Distribution of Total Housing & Subsidized Units in NYC, Brooklyn & Suborough - 2018

	New York City	Brooklyn	Bensonhurst	Borough Park	Brownsville
Total Housing Units	3519450	1053670	67933	45908	54613
Total Subsidized Units	837615	281098	993	2444	30286
Subsidized Units as Percent Total of All NYC Housing Units	23.80%	7.99%	0.03%	0.07%	0.86%
Subsidized Units as Percent Total of All NYC Subsidized Housing Units	100%	33.56%	0.12%	0.29%	3.62%
Subsidized Units as Percent Total of Neighborhood Specific Housing Units	23.80%	26.68%	1.46%	5.32%	55.46%

Data Source: NYU Furman Center, coredata.nyc.

On a neighborhood level, the distribution of subsidized housing units has significant discrepancies between the three neighborhoods of focus. Bensonhurst has only 0.12% of the total share of subsidized units in Brooklyn, and the subsidized housing total makes up 1.46% of the total housing units in the neighborhood. Borough Park has slightly higher statistics, with 0.29% of the total subsidized housing units in NYC, and 5.32% of the total housing units in the neighborhood are classified as subsidized. Brownsville, on the other hand, makes up 3.62% of the total subsidized housing units in NYC, and 55.46% of the neighborhoods' housing units are classified as currently receiving a subsidy, more than 50% above Bensonhurst percentage, and just slightly below for Borough Park. There is an evidently uneven spatial distribution of affordable housing between the three neighborhoods as described in the tables above.

On a geographic scale, the map figure below describes the total percentage concentration of subsidized housing units as a percent of the total housing units per census tract in the greater NYC. This is an overlaid layer of subsidized unit dot density classification over the total housing unit count per census tract. The goal of the map is to depicture whether the subsidized housing units are primarily located in high density census tracts, and how that transcribes by neighborhood.

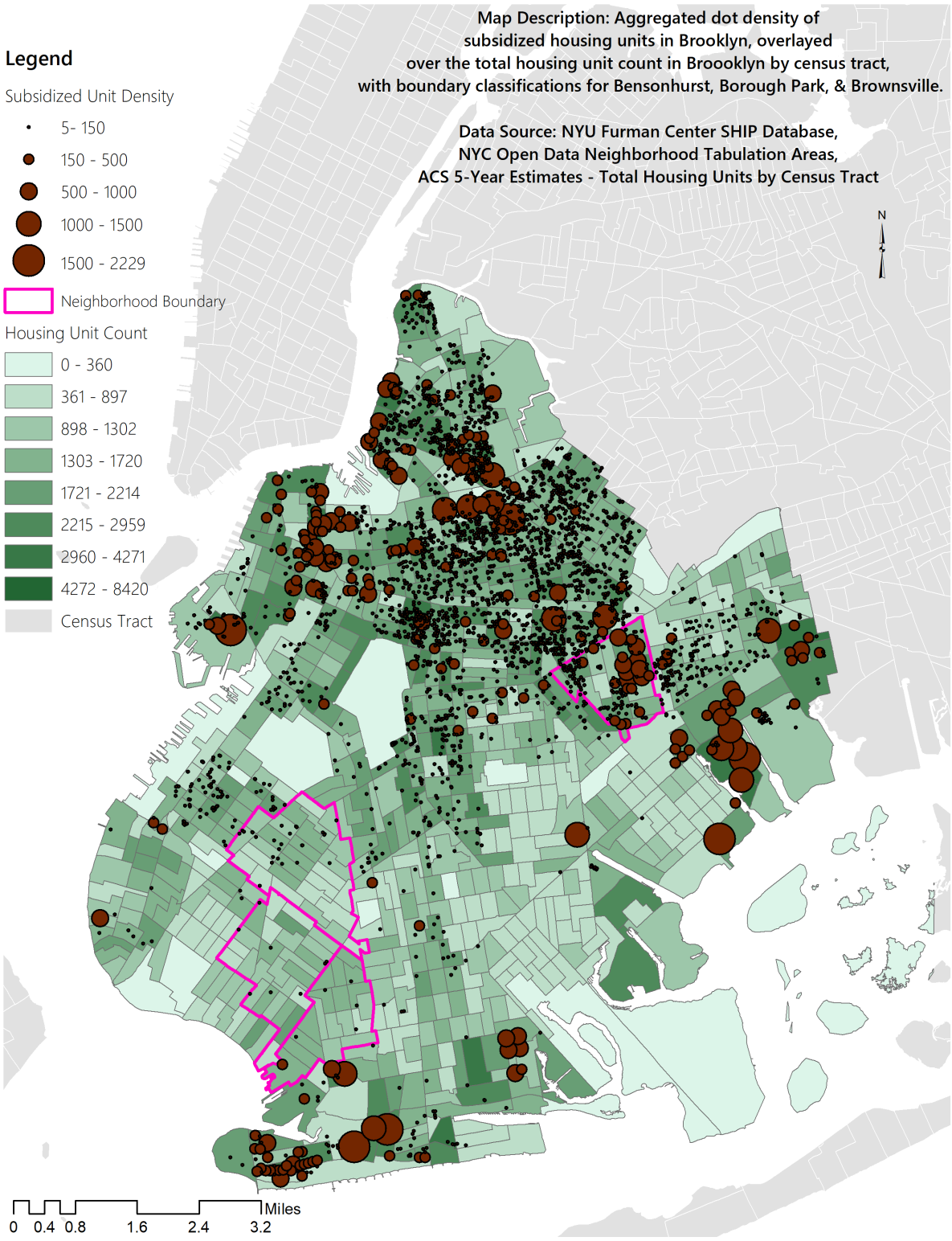


Figure 2.02: *Aggregated dot density classification of subsidized units in Brooklyn, overlaid over the total housing unit count per census tract, with the NTA boundaries of East & West Bensonhurst, Borough Park, and Brownsville pointed out.*

The majority of census tracts do not have any recorded subsidized housing units. This is, of course, within the limitations described earlier of the SHIP database. The census tracts with the greatest concentration of subsidized housing found primarily distributed across Williamsburg, Greenpoint, East Williamsburg, Bedford Stuyvesant, Brownsville, East New York, Canarsie, and Coney Island. The dot density map also showcases how the subsidized housing units' distribution compares to the overall building unit density. It is clear from the map above that a significant portion of subsidized units is found within small buildings, while some clustered buildings with high-density count spread out throughout the Brooklyn landscape. These predominantly portray public housing units.

The close-up neighborhood maps portray an evident discrepancy of subsidized housing units between the neighborhoods of Bensonhurst, Borough Park, and Brownsville, in line with the statistical data described earlier. Affordable housing development is scarcely found in Bensonhurst and Borough Park, while concentrated mainly in Brownsville. This explains the density of public housing found in Brownsville, which approximates 23.2% of the total housing unit count for the census tract in the area in 2018. Bensonhurst and Borough Park, on the other hand, do not have public housing developments, and therefore the footprint of subsidized housing units is significantly smaller. Similarly, the largest clusters of subsidized housing units are found in areas of New York City Housing Authority developments, indicating that the majority of subsidized units spread out as a whole are NYCHA developments. This discrepancy is an essential indicator in understanding the patterns of affordable housing development. It shows that most developments with a large concentration of subsidized housing units are on census tracts with public housing.

In this case, the aggregation level is important as well, as the smallest dot density map describes buildings with 5 to 150 subsidized housing units. This aggregation level can show

spatially skewed results, as many developments do not come close to even providing 150 units as a total. However, when aggregated at a more sensitive scale, with the first unit barrier being from 5 to 25 units, the difference density difference is not significant. The indicator for that can be found in the Appendix, where Figure 3.01 showcases the distribution of subsidized housing units at a greater sensitivity, split between 10 intervals, with the first interval describing the range between 5 and 25 subsidized housing units.

In expanding the discussion of this analysis, it is important to refer back to the two questions in place when analyzing the results of this paper: who does subsidize housing serve and whether or not this distribution is equal.

This primary analysis portrays an unequal distribution of subsidized units, which begins by merely pointing out the difference between the census tracts with subsidized units versus those that do not. 2165 census tract with housing units were part of this paper that comprises all of the applicable census tracts in NYC, and a total of 740 of those census tracts contained at least one subsidized housing unit. That makes up a total of 34.18% of census tracts, a number just above a third of the total census tracts in NYC.

In Bensonhurst, where the subsidized units comprise only 0.12% of the total subsidized units in Brooklyn, 15 out of the 43 census tracts contained affordable housing units, for 34.88% percent, which falls very closely with the percentage ratio found in the overall city. Still, the total number of subsidized units, in this case, is minimal, and it comprises only 1.46% of the total housing units in the area, indicating an almost complete lacking of subsidized housing units in the entire neighborhood. This indicator is significant because it shows us the actual distribution of affordable housing units in the area. It showcases that even though there has been a significant outreach in expanding and preserving subsidized units, almost neither of those things have taken

place in Bensonhurst, which continues to be underserved in terms of housing subsidies, despite the above-average poverty rates in the area as discussed in the earlier neighborhood section. As such, any further indicators on Bensonhurst will rely on a small sample of the housing stock, and one can see an apparent lack of data from this indicator in this case. In this case, developers could actively choose not to participate in city preservation programs, which could be the case due to the in Bensonhurst and Borough Park, while the opposite is taking place in Brownsville.

In Borough Park, 11 out of the 26 census tracts total have subsidized units, comprising 42.31% of the total. In this case, the subsidized housing units make up 5.32% of the total housing units in the neighborhood, a number greater than Bensonhurst, although still relatively small compared to the overall total of subsidized housing units in Brooklyn at 0.29%. Once again, the total availability of subsidized units in this neighborhood is significantly lacking. The overall distribution of those subsidized units is not relevant, as the total number continues to remain relatively small. Simply spatially, the distribution of subsidized housing does not highlight the entire landscape of affordable housing in the area, nor for the city as a whole, but in this case, it is crucial to establish that the total count of subsidized units is significantly smaller than the next neighborhood in question, Brownsville, regardless of the two areas having precisely the same poverty rate at 27.8%.

In Brownsville, 14 out of 15 of the census tracts have subsidized units. The overall subsidized unit to total housing unit share in the neighborhood is 55.46%, a dramatic increase compared to the two previous neighborhoods in consideration. As mentioned in this section above, the tremendous spatial concentration of affordable housing, in this case, can be attributed mainly to the presence of New York City Housing Authority (NYCHA) developments in the neighborhood. However, it was also noted that the NYCHA housing in Brownsville makes up only

23.2% of the neighborhood's total housing units, leaving for a gap difference of 23.26%. This means without considering the density contribution of public housing in the neighborhood, Brownsville would still have a percentage over four times greater than in Borough Park and over 20% greater than Bensonhurst. This clustered pattern of development in the area is not, however, attributed to any specific factor thus far in this research, but it does fall in line with the surrounding neighborhood statistics, as subsidized housing units are concentrated at a greater rate in the neighborhoods surrounding Brownsville, versus the neighborhoods surrounding Bensonhurst and Borough Park.

So ultimately, the subsidized housing units are unequally distributed in NYC as a whole, even within the three neighborhoods in question. On an overall geographic scale, only one-third of the total share of census tracts has units with subsidies. However, there are neighborhoods with an immense concentration of subsidized housing units compared to the total housing units and one neighborhood like Brownsville. In the other two neighborhoods in question, however, that is not the case. A simple explanation for the lack of subsidized housing units could explain the lack of rental units in the area. In Brownsville, the homeownership rate is only 17.9% of the total housing stock as of 2018.

In comparison, in Bensonhurst and Borough Park, the homeownership rates are 36.3% and 35.3%, respectively. This difference equates to a shy of 20%, which could be an explanatory indicator for the gap difference between the total share of subsidized housing units and rental units. However, the difference in the percentages of units being rental is not solely alone responsible for the subsidized ratio discrepancy in comparison to the total rental market per neighborhood, as it was indicated that the subsidized housing units in Bensonhurst and Borough Park continue to serve a tiny percentage of the total rental units still.

A report published by the U.S. Department of Housing and Urban Development entitled *"Why Not In Our Community?"* establishes multiple factors that explain the discrepancies from one neighborhood to another. They identify numerous causes, such as infrastructure and development costs, local regulations, building practices, bureaucratic inertia, property taxes, and land availability as being present in many neighborhoods. However, this report published in 1991 identified the most significant opposition on the expansion of affordable housing to be the existing residents and public officials representing them in the neighborhoods that lacked it (U.S. HUD, 2013). The original report from 1991 coined this term as NIMBY, short for "not in my back yard," which describes the ongoing pushback and local regulatory tactics of limiting the expansion of affordable housing development in select neighborhoods, practiced primarily by local officials.

Discussing the spatial disparities of affordable housing development would fall short if the conversation did not expand to consider the effect of NIMBYs and the extent to which they are prevalent today in New York City. However, a quantitative approach to this phenomenon is mostly limited through the constraints of available datasets describing it. Therefore, one should analyze it through an external place-based qualitative study that makes more significant quantitative assumptions as part of its findings. However, it remains an essential aspect of consideration when looking at the spatial disparity of affordable housing development on a local level. In Brownsville, per se, we see that the total subsidized units make up 23.26% of the total housing stock in the area when excluding public housing from the equation. What indicators are probable in this scenario in regards to this spatial difference? An argument could be that the idea of NIMBYs is not present in the area or that the local officials do not push back on policies creating more subsidized housing. However, research on this phenomenon can and should expand further. We see that the presence of subsidized housing units found to be clustered across New York City neighborhoods, while

completely lacking presence in others. Further research to study the total housing units developed by neighborhood to understand development patterns and how those relate to local zoning and land use regulations and restrictions would prove beneficial.

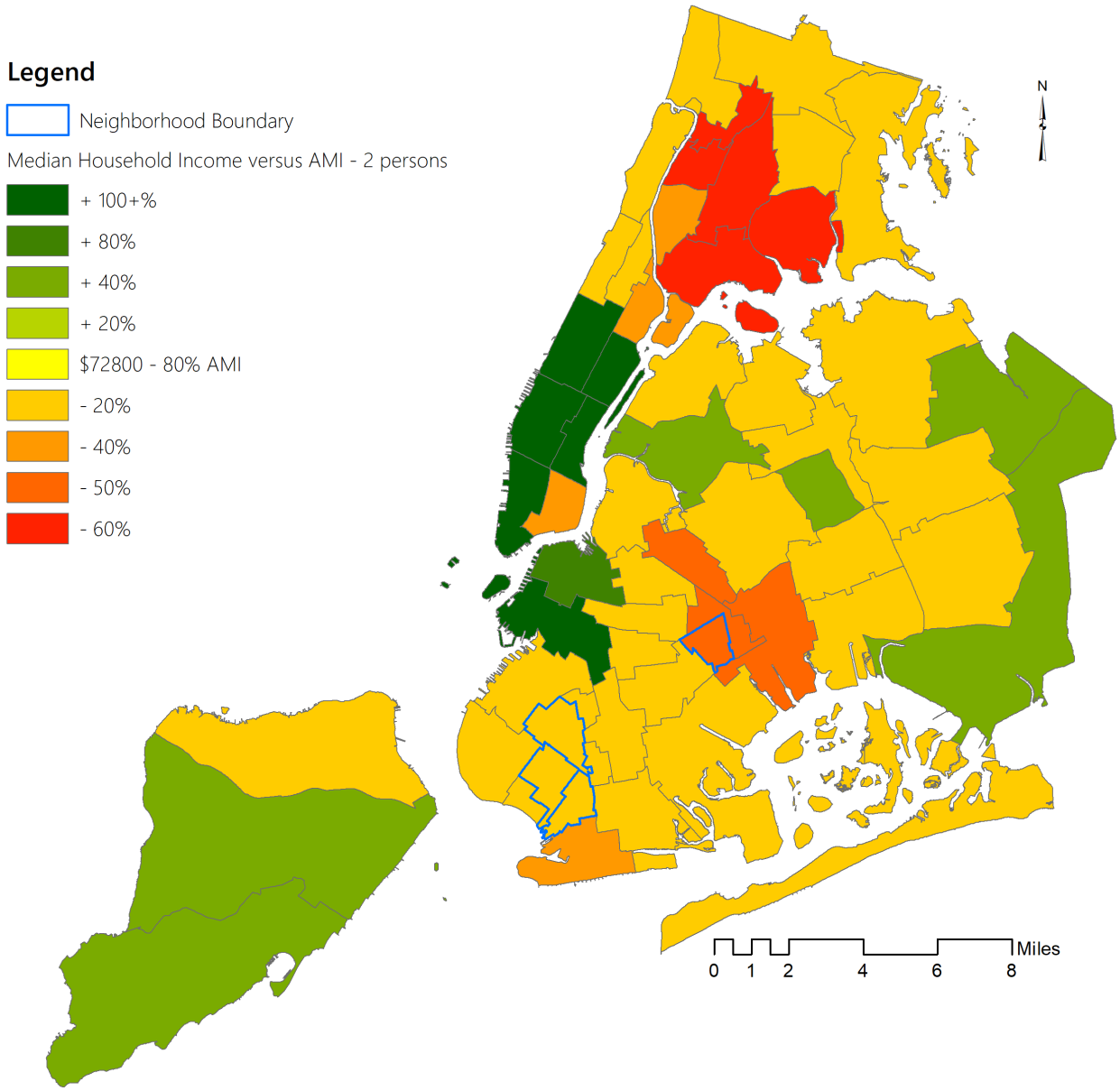
In a publication on the affordable housing landscape conditions in Hartford, Connecticut, the spatial disparity of affordable housing equates to a new form of segregation, that being housing segregation pushed forth by formulated city policies that predominantly concentrate affordable housing development in low-income, high-crime, and little job-access neighborhoods across the city (Thomas, 2019). This becomes reinforced when the nonprofit behind the research indicated that 88% of the total new apartment developments receiving Low Income Housing Tax Credits (LIHTC) are found in low opportunity areas, classified by the variables described above. One can describe this as further reinforcing concentrated poverty rates and creating an urban landscape in which housing and employment opportunities are segregated based on new affordable housing units' geographic placement. By design, many of the tax credit programs were created to address the lack of affordable housing in low-income areas, but an unintended outcome of this approach is the perpetuation of racial, residential, and economic segregation.

This form of segregation is not new, however. It can be linked to one of the earlier sections of this paper. We discussed the ideological shift of urban city center development patterns and the transition from socio-demographic housing policies to market-economics driven development, fueled in part by establishing the LIHTC criteria during the Reagan administration. This concept of late neoliberalism is effectively described as tied to some of the causes rendering local and state officials to provide adequate, equitable, and affordable housing for all, as the concepts of homeownership, housing policy, housing rights have all been incentivized through financial incentives (Rolnik, 2013). This ideological shift is discussed in short detail earlier in the paper,

and for sound reasoning. The development patterns of affordable housing become limited from a local and a federal standpoint. The patterns are influenced by external and internal factors, as discussed in this paper. The presence of NIMBY activists in local representations of neighborhoods is not independent of the ideology of neoliberalism, and one cannot interpret it as such. In 1999, a report showcased that the price of newly built homes could decline by up to 25% by implementing a city-wide policy that breaks down the neighborhood and local zoning barriers that prevent affordable housing development (Salama, Schill, Stark, 1999). For many residents, NIMBY pushback ties back to property value and the financialization of housing policy, as the federal authorities took a step back, allowing for private development to, in turn, become the provider for significantly expanding the subsidized housing landscape. A similar report estimated that the application of stricter regulatory regulations increased rents by 17%, house values by 51%, and dropped homeownership rates by 10% (Green, Malpezzi, 2000). This shows that local zoning and housing regulations have a significant impact on the supply of housing and its affordability. Whether those indicators are true on the local level for Bensonhurst and Borough Park neighborhoods are hard to establish. However, despite the lack of qualitative data on that front, the rental distribution configuration can be understood further. The construction of new affordable housing in NYC takes place through LIHTC, dependent on the existing Area Median Income (AMI) levels per city. An analysis of the gap between the AMI levels and the median household income by size, per neighborhood, is showcased below.

Analysis #2

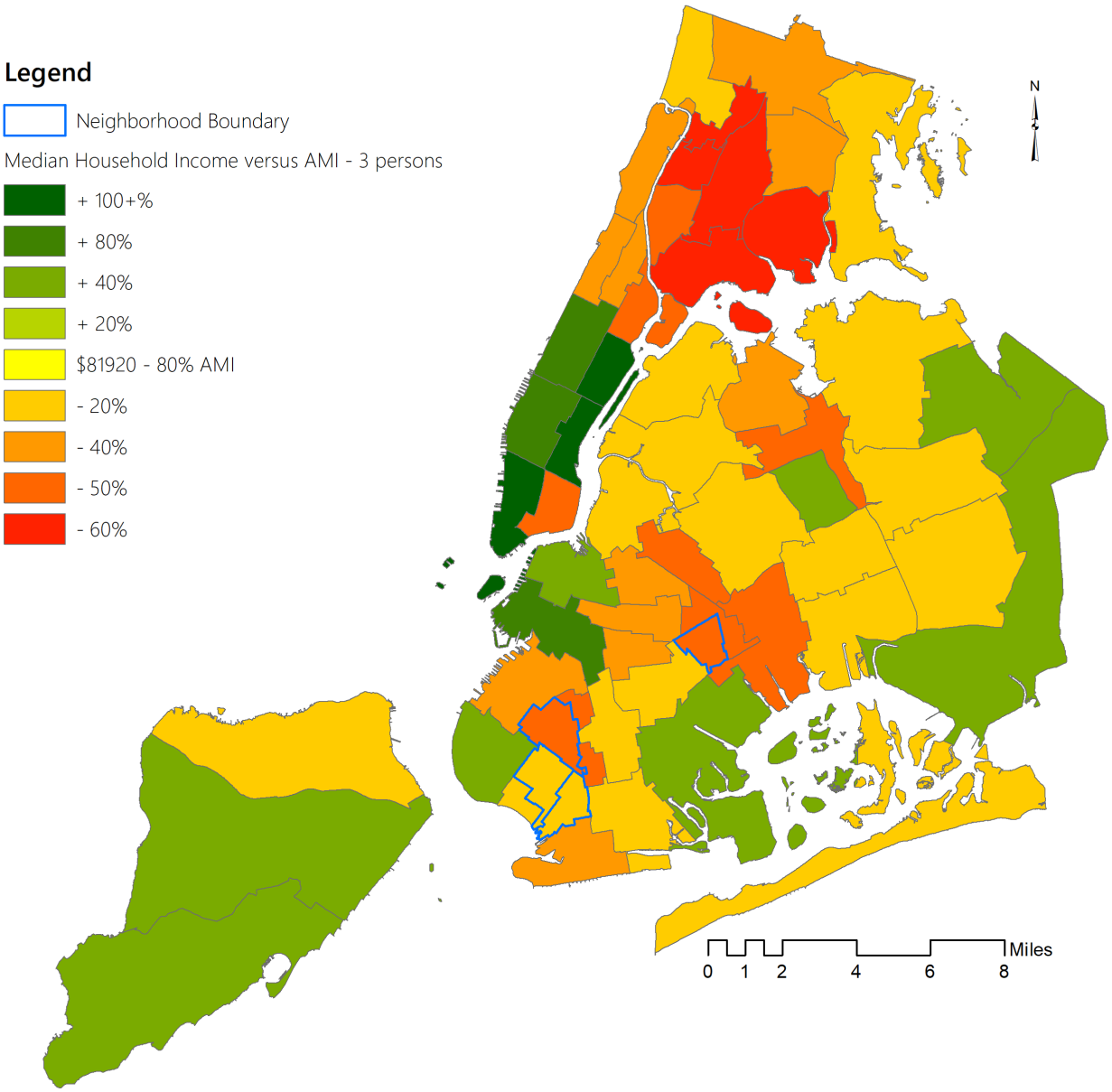
The following analysis takes a more aggregated approach. It utilizes Public Use Microdata Area (PUMA) boundaries, median household income 5-Year American Community Survey estimates for 2018, and the NYC Area Median Income (AMI) classification. Essentially, this analysis provides a spatial distribution comparison between the applicable AMI level per census tracts, and a positive to negative correlation by neighborhood classified via PUMA variables, which are effective representations of the community board district boundaries in each borough. In all cases, the maps showcase the overall comparisons of affordability levels versus the area median household income, focused on describing the distribution based on household size. The household sizes picked, in this case, are 2-person, 3-person, 4-person, and 5-person, which describe the majority of families living in housing units in Bensonhurst, Borough Park, and Brownsville. Analysis of the maps is done individually, at the neighborhood level, and only for the three neighborhoods above. However, the greater maps depict any neighborhood clusters or possible indicators of affordability that might be of significance. The scale on all of these maps is done at a percent change and presented at a graduated range level for easy understanding of the gap between median household income and AMI level per neighborhood, rather than focusing on exact values for all neighborhoods. Apparent differences in median income and the AMI bracket are analyzed and discussed for each household size only in Bensonhurst, Borough Park, and Brownsville. As regarding the affordability comparison, the median AMI point is at the 80% affordability level. The reason for that classification depends on the Housing New York plan's focus, which has primarily contributed to the construction of very low-income, 31-50% AMI, and low-income, 51-80%. This effectively allows for an analysis of the gap between the neighborhoods in place at a level that applies to the primary development hurdles in place.



Map Description: Neighborhood Gap comparison between 2-person median household income against the NYC Area Median Income (AMI)

Data Source: Housing New York Area Median Income (AMI) Levels
NYC Open Data Public Use Microdata Areas (PUMA)
NYC Open Data Neighborhood Tabulation Areas (NTA)
ACS 5-Year Estimates - Median Income in the Past 12 Months by PUMA - 2018

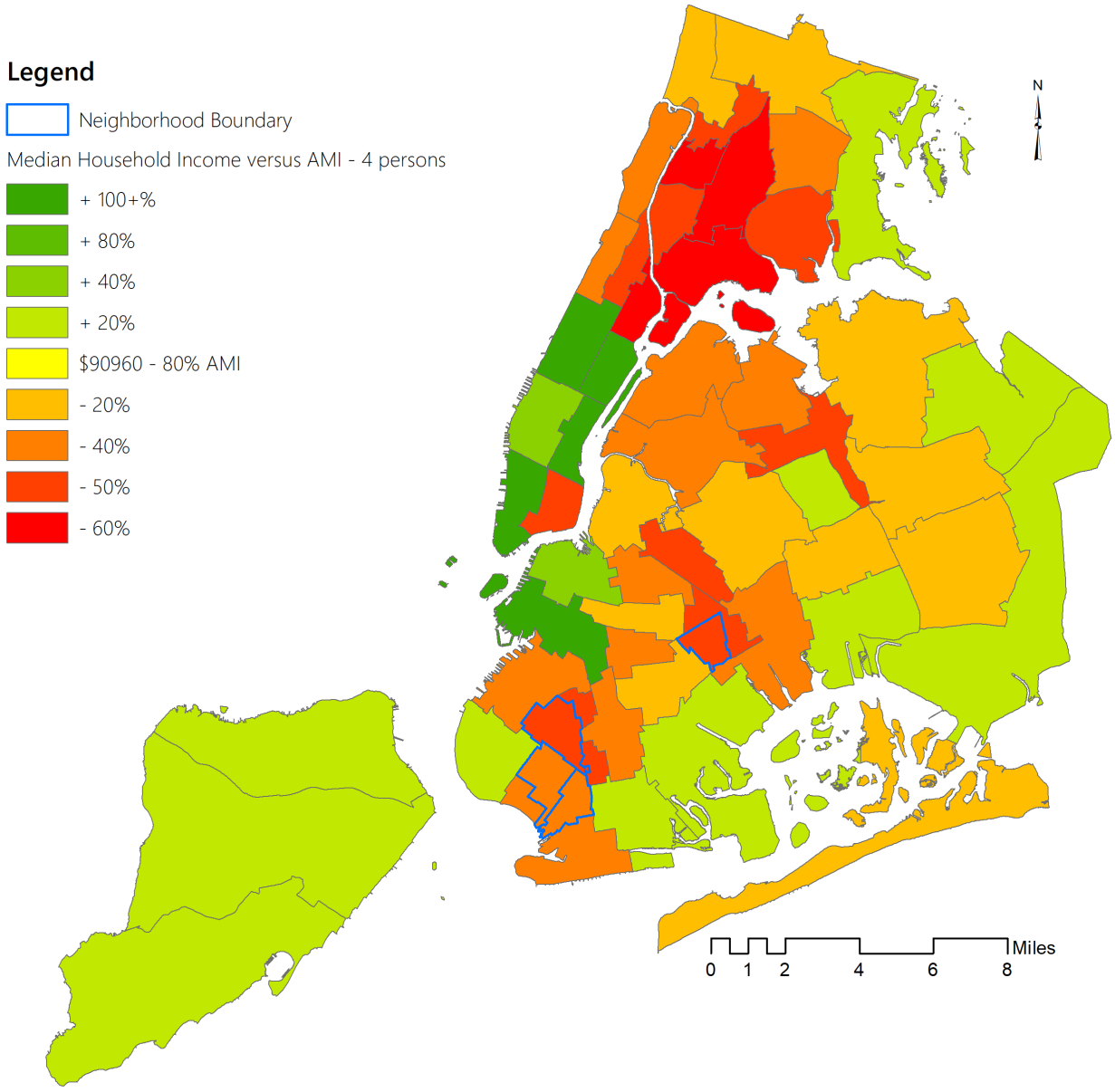
Figure 2.03: *2-person household median income versus NYC Area Median Income (AMI) gap. Comparison of level of affordability based on 2018 ACS 5-Year Estimates Median Income in the past 12 Months*



Map Description: Neighborhood Gap comparison between 3-person median household income against the NYC Area Median Income (AMI)

Data Source: Housing New York Area Median Income (AMI) Levels
NYC Open Data Public Use Microdata Areas (PUMA)
NYC Open Data Neighborhood Tabulation Areas (NTA)
ACS 5-Year Estimates - Median Income in the Past 12 Months by PUMA - 2018

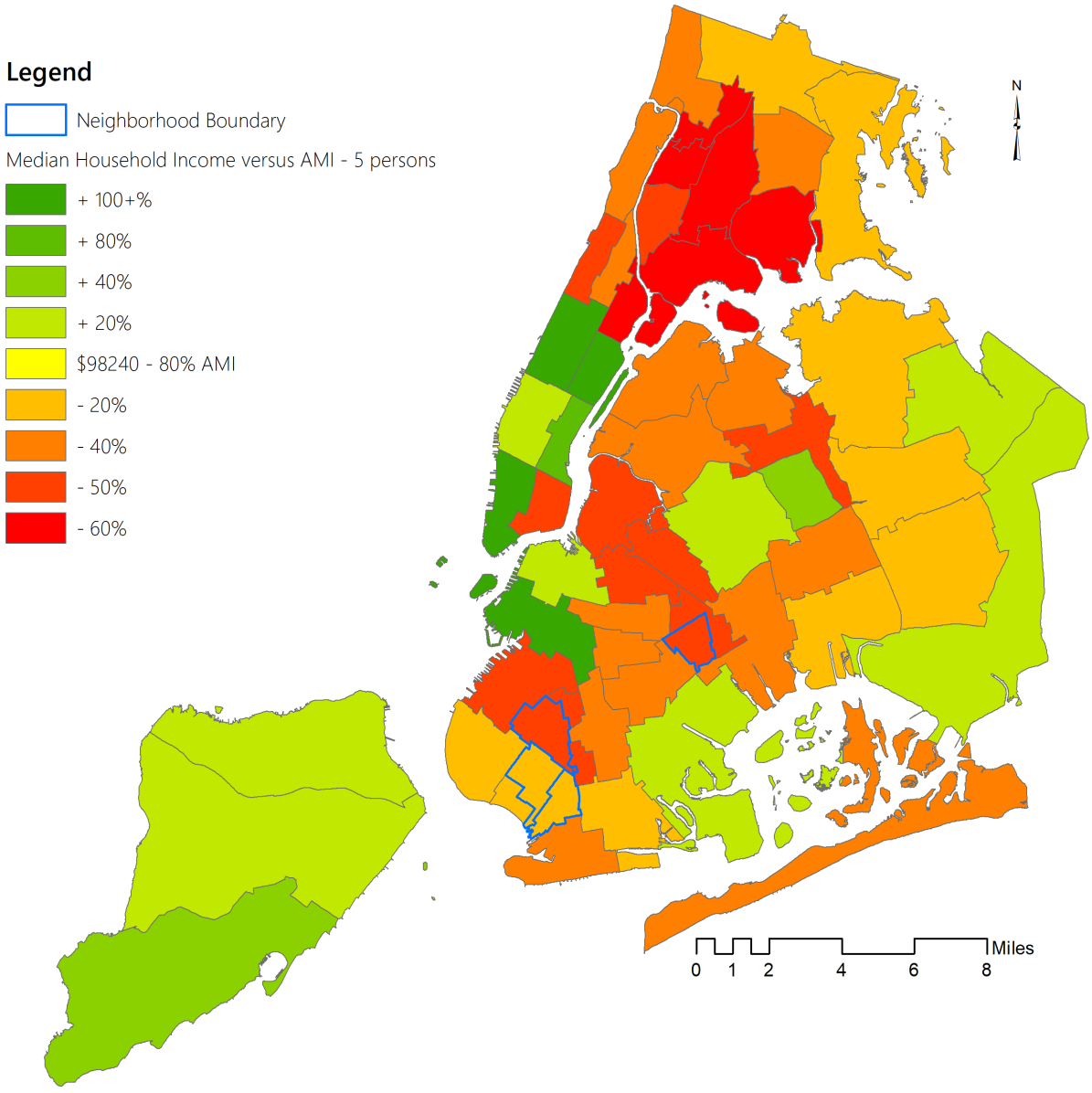
Figure 2.04: *3-person household median income versus NYC Area Median Income (AMI) gap. Comparison of level of affordability based on 2018 ACS 5-Year Estimates Median Income in the past 12 Months*



Map Description: Neighborhood Gap comparison between 4-person median household income against the NYC Area Median Income (AMI)

Data Source: Housing New York Area Median Income (AMI) Levels
NYC Open Data Public Use Microdata Areas (PUMA)
NYC Open Data Neighborhood Tabulation Areas (NTA)
ACS 5-Year Estimates - Median Income in the Past 12 Months by PUMA - 2018

Figure 2.05: *4-person household median income versus NYC Area Median Income (AMI) gap. Comparison of level of affordability based on 2018 ACS 5-Year Estimates Median Income in the past 12 Months*



Map Description: Neighborhood Gap comparison between 5-person median household income against the NYC Area Median Income (AMI)

Data Source: Housing New York Area Median Income (AMI) Levels
NYC Open Data Public Use Microdata Areas (PUMA)
NYC Open Data Neighborhood Tabulation Areas (NTA)
ACS 5-Year Estimates - Median Income in the Past 12 Months by PUMA - 2018

Figure 2.06: *5-person household median income versus NYC Area Median Income (AMI) gap. Comparison of level of affordability based on 2018 ACS 5-Year Estimates Median Income in the past 12 Months*

The previous four maps describe, as mentioned, the gap between the Area Median Income and the median household income per neighborhood, classified by 2-person, 3-person, 4-person, and 5-person households. The analysis below conducted on the neighborhood level is for the three neighborhoods of our study, Bensonhurst, Borough Park, and Brownsville.

Bensonhurst

The rental market in Bensonhurst makes up 63.7% of the total housing stock in place. The average median rent across all unit sizes is $1,430, just $30 shy of the citywide median gross rent in 2018, and $40 below the overall Brooklyn median gross rent in 2018. This places Bensonhurst at a below-average median gross rent on all levels, although it does not accurately describe the affordability levels in place. 32.5% of all households are moderately rent-burdened. In comparison, 34.3% of total households are severely rent-burdened, therefore paying more than 50% of the total household income towards rent. From that, 47.9% are severely rent-burdened on the low-income bracket. More closely, when referencing the maps above, a few conclusions can be made.

In 2-person, 3-person, and 5-person households in Bensonhurst, the yearly median income per household is always at a level of approximately -20% of the AMI affordability barrier when set at 80%. This is not to say that Bensonhurst's rental landscape does not have rentals at 80% affordability. 81% of all rental units are affordable at the 80% AMI level. However, even with that percent being so significantly dominating the neighborhood's rental landscape, more than a third of all households are severely rent-burdened. Mainly, 4-person households are rent-burdened at a greater than 30% difference compared to the 80% AMI for NYC. The rate of severely rent-burdened households has grown by over approximately 4% since the start of the

millennia. However, the affordability levels have slightly dropped at the 80% AMI level from 2010 to 2018, from 82.5% to 81%. The necessary change of affordability bracket would target at the 60% AMI level. At that level, the vast majority of 2-person, 3-person, and 4-person households would be at a nonnegative gap between the AMI bracket and the median household income, significantly reducing the affordability gap in the area and improving the percentage of severely and moderately rent-burdened households. It is essential to note in this case that there are absolutely no public housing projects in Bensonhurst and that the total percentage of renters receiving housing vouchers had dropped by 3.5% from 2010 to 2018 and is currently at 4.8%.

In this case, the numbers indicate that not only has the rental market of Bensonhurst decreased over the past ten years, but the applicable rental market has become less affordable for the residents renting in the area. Furthermore, although the current share of subsidized units in Bensonhurst is minuscule and insignificant compared to other neighborhoods and Brooklyn, or NYC, more than 80% of the total subsidized units in the neighborhood are eligible to expire from housing programs by 2036 and later. This would effectively decrease the total subsidized stock by 4/5, a dramatic projected drop over 20 years. Such a change does not consider the possibility of creating new subsidized units in the neighborhood over the next 20 years. However, it puts into perspective the dire need to expand affordable and subsidized housing units in the near and long-term future, especially at the possibility of a surgency in need of rental assistance for rent-burdened tenants. Compared to other neighborhoods in the vicinity, Bensonhurst is relatively stable in its AMI to median income gap and does not fluctuate significantly between the different household sizes, indicating a relatively stable landscape of affordability in the area across the spectrum.

Borough Park

The rental market in Borough Park makes up 64.7% of the total housing stock in place. The median gross rent across all unit sizes is $1,580, which is approximately 8.2% higher than the median gross rent in NYC and 7.5% higher than the median gross rent in Brooklyn in 2018. This places Borough Park at a slightly, although not insignificantly higher median gross rent than most neighborhoods in Brooklyn. In this case, the affordability factor needs to be further analyzed as the rental market is slightly different from that of Bensonhurst, despite their relative proximity to one another. In Borough Park, 27.0% of all households are moderately rent-burdened, a 5.5% decrease from Bensonhurst, yet 44.7% of all renters are severely rent-burdened 57.0% are severely rent-burdened on the low-income bracket, a 10.4% and 9.1% increase difference from Bensonhurst. Both percentages have also increased by approximately 10% since the beginning of the millennia. This indicates that although fewer households are moderately rent-burdened on a broad scale, there is a great divide between that percentage and the percent of severely rent-burdened households. This leads to the need to expand affordable and subsidized housing units or rental assistance for the lower AMI bracket classification, hence the brackets of greater affordability.

To understand the difference, the analysis focused on the AMI to median household income gap in the maps above. In 2-person households, the gap is approximately negative 20%, while it slowly increases at the negative level in the 3-person, 4-person, and 5-person households. This change portrays that the affordability factor of Borough Park renters decreases as the household size increases. On a grand scale, 60.8% of all rental units are affordable at the 80% AMI bracket, over 20% less than in Bensonhurst. While in Bensonhurst, a transition closer to the 60% AMI bracket could bridge most of the gap between median income and AMI, the case

would not be the same in Borough Park. In Borough Park, greater emphasis would have to be placed on the lower AMI brackets, as the rental gap is relatively similar on a 2-person household. However, median income decreases further for 3-person households and only increases slightly above the 2-person median household income for the 4-person household income, a significant and troublesome gap for 4-person households. At an even greater surprise, the median household income drops at its lowest for 5-person households, below all other household size levels.

The median income change falls in line with the maps above, which portray that as the household size of families' increases in Borough Park, their applicable median household income to AMI gap increases further. This primary difference should come into serious consideration. It portrays a positive correlation between the household size and the AMI bracket, which is a main overall negative indicator of the affordable housing market in the area and its trajectory. Borough Park, similarly to Bensonhurst, has zero public housing projects, although 13.1% of all renters receive housing choice vouchers in privately owned rental units. However, similarly to Bensonhurst, many currently subsidized units in Borough Park are also eligible to expire from housing programs shortly. In this case, 12.1% of units are eligible to expire by 2025, 24.7% by 2035, and 33% by 2036 and after. This is of positive light and at a significantly lesser percentage than Bensonhurst. Nevertheless, despite the overall greater presence of subsidized units in the neighborhood, the AMI levels are not accurately representative of the area's affordable housing needs. The negative gap continuously increases as household sizes increase as well. The affordable housing needs in this neighborhood are therefore of most significant importance. Borough Park renters are in line with the lowest affordability levels across all household sizes compared to all neighborhoods in NYC, despite their similar homeownership rate with Bensonhurst. Simply put, the median income is decreasing, and rentals in the area are

significantly higher than average, which has arguably contributed to a worsening market rate for renters in the area.

Brownsville

Our analysis's last neighborhood, Brownsville, has an entirely different rental landscape than the previous two neighborhoods. While the poverty level is precisely the same as Borough Park, at 27.8%, and 81% of all rental units are affordable at the 80% AMI level, the same with Bensonhurst, the positive changes are unfortunately not as significant as one would think they would be.

The rental market in Brownsville makes up 82.1% of all neighborhood housing units, a significant increase from the previous two neighborhoods. The median gross rent in the area is $990, 32.2% lower than the median gross rent in NYC, and almost the same percent lower for Brooklyn. This is due to the significant clustering of affordable and subsidized housing units in this area and the presence of NYCHA public housing, which makes up 23.2% of the total housing stock, as mentioned earlier in the study. However, despite this significant drop compared to the other two neighborhoods in place, the rate of moderately rent-burdened households was recorded at 28.4% in 2018, only slightly above Borough Park and below Bensonhurst. 38.5% of all households were severely rent-burdened, in this case, lower than Borough Park, but greater than Bensonhurst by four percentage points. What this hints towards, in this case, is that Brownsville, although having significantly greater clustering of subsidized housing, is being faced by a stagnant median income per household problem, which effectively creates affordability constraints that are not similar to either of the neighborhoods examined before. In this case, one could argue that low-income housing concentration responds to the low median

income in the areas. In Bensonhurst, median income increases significantly over time to match the AMI increase per household size, yet in Borough Park, we see the opposite take place. In Brownsville, the median income level begins at such a low level, where even though it increases as the household size increases, the difference is already at such a significantly low level that the affordability change is minuscule.

For 2-person and 3-person households, the negative gap is at approximately 50% below the AMI level. That increases for 4-person and 5-person households, where the negative gap is approximately 60% lower than the AMI. Between 4-person and 5-person households, the AMI bracket jumps by a numerical level approximately four times greater than the increase of the median income per household. In Brownsville, while 81% of units are affordable at the 80% AMI, 26.1% of the total is also affordable at the 30% AMI level, portraying significantly important affordability at the extremely low-income bracket, which is otherwise insignificant in both other neighborhoods at 6.5% and 3.3% respectively in Bensonhurst and Borough Park. What does this tell us in this case? Simply put, the emphasis placed on providing affordable housing at the extremely-low income and low-income AMI classification added that public housing houses the poorest residents. That emphasis can ultimately relate to public housing's applicability in the area, the 3rd greatest per neighborhood in NYC.

A total of 18,888 subsidized units exist in Brownsville as of 2019, and 21.9% of those are eligible to expire from housing programs by 2036 and after. This tells us that Brownsville's affordable housing landscape is likely to remain at the same level as many subsidized units will stop subsidies, even as more units develop. However, its affordability factor will not improve under current development efforts, even as new developments are in the area's pipeline. The area median income per household is significantly lower than comparable neighborhoods. Even

though the gross rent level is also vastly lower than city averages, it still fails to bridge the AMI bracket gap, effectively dividing the affordable housing landscape into two distinctive parts. The first part is that of extreme affordability, predominantly influenced by the public housing in the area. The second part consists of Low-Income Housing Tax Credit properties, and primarily built at the 60% AMI bracket. In short, the new construction of apartments at the 80% AMI level is unattainable for local households, as they would not qualify to live in that housing. Instead, the affordable units cluster between NYCHA public housing, Mitchell-Lama units, and HUD project-based rental assistance programs affordable to the local neighborhood. The remainder of subsidized units in the neighborhood, although of great numbers, is not truly affordable to the neighborhood, as low-income households are still 44.9% severely rent-burdened, and that number has increased by 5.9% from 2010, indicating a reduction in affordability as more subsidized developments go up in the area. The case here could also expand to argue for expanded rental assistance for households, as people who cannot obtain leases for affordable apartments generally end up becoming rent-burdened.

The composite of the analysis above further assists with understanding the applicability of subsidized housing units in the area and the extent to which they distribute equally and serve each neighborhood. We saw that although Brownsville has a dramatically larger share of affordable housing units than Bensonhurst and Borough Park, there is an evident divide between the affordability levels. The divide is between public housing (other extremely low subsidized levels) versus those tied to LIHTC criteria and depend on AMI bracket qualifications. Although the affordable housing stock has increased over the years, one could argue that the neighborhood's real affordability index has decreased, as the applicability of housing affordability remains fragmented. However, the goal has been to expand new construction and

continue preservation efforts on a large scale, which is essential when looking at statistics in context. In Borough Park, on the other hand, affordability is inversely linked to growth in household size. There is an emphasis on extremely low-income subsidized units in Bensonhurst, but the landscape is relatively insignificant on all other brackets.

How can the gap between median income and AMI help us further understand the needs of affordability in each of those neighborhoods? Primarily, it shows that the AMI bracket applicability serves no directional purpose as it currently stands. The universally applicable AMI classifications consider the median household income of neighborhoods that are systemically, and across all household sizes, earning significantly more than the AMI level for the same household size, thus inversely affecting neighborhoods that fall significantly under. In this case, a general question would be whether the government should further promote economic integration across neighborhood boundaries, or continue similar practices, encouraging poverty concentration. On the other hand, the universal AMI range is responsible for creating many extremely low-income housing units in areas where the median income is significantly above average. This new avenue opens opportunities for people of extremely low, very low, and low income to live and possibly work in neighborhoods where they would otherwise not be able to. While important for positive socio-economic growth, on the other hand, this is faced with creating affordable housing in other neighborhoods that have AMI levels, the likes of which local households cannot qualify for. This not only perpetuates displacement overtime for local residents by eventually pricing them out of subsidized units, but it also creates clustering of affordable housing development that is dependent on market-based returns, and primarily geared around construction and land costs, hence justifying the placement of new construction in areas where there is already a significant presence of subsidized units. Brownsville is an excellent

example of that, where new subsidized housing gets built in the thousands. Nevertheless, its actual affordability (subsidized units that local residents' median household income allows them to qualify for) is negatively impacted while still creating segregated zones of housing, essentially missing the mark on multiple fronts. Ultimately, this ties back to the discussion of market-based economics driving all new development aspects of affordable housing. Building housing is expensive, and building affordable housing is particularly expensive without government assistance and favorable market conditions. Areas with high affordable housing concentrations usually have reduced construction, and land prices, which perpetuates the issue further as more affordable housing units get built nearby. They, in turn, do not even serve the community that lives there. This divide portrays a critical ideological issue with this debate, that being whom should affordable housing be built for? Should it be built only to cater to residents in the local community, or offer the possibility for social mobility across neighborhoods to cater to broader economic needs?

As the last component of this analysis, there is a brief statistical comparison on the efficacy of the Housing New York program and its impact in the three neighborhoods in question since its inception. This utilizes the NYC Open Data Housing New York by Building dataset, which contains records of 4,565 developments in NYC. However, 1,066 properties are confidential and thus have limited data availability, as noted in the data limitations section. Regardless, the Borough Code for each development is in place, and therefore the data will once again be presented at the neighborhood level for Bensonhurst, Borough Park, and Brownsville.

Analysis #3

The third component of this analysis looks at the developments of subsidized housing units via building and AMI distribution under the Housing New York plan for the neighborhoods of

Bensonhurst, Borough Park, and Brownsville. The analysis only takes into account developments within those neighborhoods and is done at a statistical level, as approximately one-fourth of the entire dataset lacks geographic notation for mapping due to confidentiality reasons.

Table 2.03: Housing New York Developments 2014 - 6/30/2020 - Community Board 11

New Construction	Preservation	Total Unit Count	0 - 30% AMI	31 - 50% AMI	51 - 80% AMI	81 - 120% AMI	120 - 165% AMI	Other Income
9	4	373	118	244	8	0	0	3

Table 2.04: Housing New York Developments 2014 - 6/30/2020 - Community Board 12

New Construction	Preservation	Total Unit Count	0 - 30% AMI	31 - 50% AMI	51 - 80% AMI	81 - 120% AMI	120 - 165% AMI	Other Income
16	3	243	2	1	185	36	7	1

Table 2.05: Housing New York Developments 2014 - 6/30/2020 - Community Board 16

New Construction	Preservation	Total Unit Count	0 - 30% AMI	31 - 50% AMI	51 - 80% AMI	81 - 120% AMI	120 - 165% AMI	Other Income
60	178	5462	906	581	2927	757	94	26

The three tables present a summed analysis of the total units of new construction and preservation of their respective neighborhoods, as a summation of data collected by building. The tables in this analysis referenced the overall details tables found in the appendix under 3.03, 3.04, and 3.05, respectively, which contain the raw data per neighborhood, cleaned and classified according to the same variables described above.

In this case, the data showcase a few different things and help confirm some of the speculator arguments that arose from the previous sections of analysis. It reinforces the argument that affordable housing development remains concentrated in areas that already have affordable housing, like Brownsville. However, it does not explain the full spatial patterning of affordable housing development since the neighborhood sample is minimal. Sixty new building constructions took place from 2014 to date, with some of the projects have begun construction in 2020 and have therefore not finished still. On the other hand, 178 projects are classified as preservation. The preservation units account for 3,173 units, compared to 2,289 units of new construction as extracted from the raw data. In Brownsville, the development patterns fall in line with the second component of analysis assumptions. We see that the vast majority of

development was within the low-income bracket, at 51% to 80% AMI. This is troublesome. We speculated earlier that this is the occurring case. The development emphasis on low-income housing would effectively price out a significant portion of families in the area. Those families do not qualify for the AMI brackets built while still contributing to the clustering of affordable units in specific areas. However, the second most significant number is 0 – 30% AMI units, which is a positive indicator of focus. It portrays that some of the development at the higher AMI bracket has subsequently enabled affordable housing units at the lowest AMI classification. In this case, the dilemma presented once again is the development split's actual efficacy and whether the creation of very-low and low-income housing ultimately enables the development of extremely low housing where it otherwise would be financially unachievable.

In Bensonhurst, we see a general increase of incremental developments under the Housing New York program, with an almost exclusive focus on the two lowest AMI brackets. Further emphasis could be placed on housing development in general in the neighborhood to understand patterns better. This is a positive indicator and falls in line with the second indicator's statistical data. The focus was placed on extremely-low income units, as the percentage grew from 3.3% to 6.5% of the total housing stock in place. The improved emphasis on the two lowest brackets is a positive indicator of the efficacy developments that fall under the Housing New York program in the area. However, the available number of units is still dramatically lower than in other neighborhoods of similar size and location away from the city center. The vast majority of units fall under preservation, as almost all new construction units fall under the Homeownership Assistance Program and are all single-family units.

However, in Borough Park, we see the development primarily concentrated in the low-income bracket, while development predominantly focused on new construction instead of

preservation. In this case, when analyzing the raw data, 181 units of the ones available at the 51 – 80% AMI were all of one preservation development. Therefore, the true applicability of new affordable development is low in this case, precisely like in Bensonhurst.

In all three neighborhoods, preservation has been the predominant focus. It is easier to keep an apartment at an affordable rate than build a new apartment at the same affordable level. The statistics fall in line with the Housing New York plan's general city directory, where 69% of all buildings classify as preservation constructions, versus 31% of new construction. While preservation is inherently essential, it is important to note that the affordable housing landscape cannot improve purely by preserving existing subsidized units. The data indicates a positive change over time. However, the reality is that distribution and development patterns continue to remain skewed based on market-demand economics. These patterns cluster affordable housing together in areas where it is profitable and continue to remain stagnant in other neighborhoods in critical need of affordable housing development. These areas consistently lack private investment and willingness to make it work. When seen as a composite, these considerations paint a definite image both of spatial clustering and geographic disparity across different neighborhoods. While the paper's focus has been to identify the contextual background leading up to the affordable housing landscape today and approach spatial disparities from a neighborhood level, this next section will bring forward some additional avenues of research that could benefit this study and some preliminary recommendations.

Recommendations for Further Research

The comprehensive research presented in this paper takes a contextual approach in analyzing the underlying implications, housing policies, ideological and market shifts, and the ways through which they influenced the development of affordable housing policies and the expansion of the affordable housing landscape as a whole in NYC. However, the analytical approach took a closer look at three neighborhoods and drew overall comparisons of how they relate to greater spatial patterns and internally within the neighborhoods themselves. Although this research is thorough in its analysis and presents arguable cases of spatial disparities, it does not aim to present concrete regulatory suggestions and policy changes that the city should implement. Instead, this paper's goal was to recognize and establish a thinking framework around the development of affordable housing and the expansion of affordable housing development on small scales, as they relate to larger scales. However, there are possible ramifications of the issues discussed in this case. These are considerations for future research in understanding the applicability of this case in a greater policy context.

From the data presented in the first component of the analysis, it is evident that spatial disparity exists across multiple levels in NYC's urban landscape and is found clustered around high-density development and public housing, which was an expected outcome coming into the research. However, a key indicator is the continuation of the clustering of subsidized housing units around areas with an already established affordable housing landscape, especially compared to neighborhoods that have a significantly lesser footprint. When relating to some of the literary work discussed earlier, the clustering of subsidized and affordable housing units tends to be standard across cities. It relates to market-based economic policies that lead to development procedures. A possible policy recommendation in this cause could be the

directional implementation of new subsidized housing development. Directional placement is not implying a totalitarian government control over affordable housing, but rather a more active role in assisting with housing placement through incentivized methods. Market-based economics will continue to drive the development of affordable housing. Therefore, the state and local government's role should be to create incentivized policies that place focus on local levels where intervention is needed.

Such a directional shift from the existing affordable development landscape is, realistically, confined to variables that are often outside the reach of local, state, and federal governments. The primary considerations would be the price of land per square foot and the construction costs in place that enable development in the area. The government is incapable of influencing local construction and land pricing. Therefore, it cannot ultimately drive demand towards one area over another without disrupting the local real estate market as a whole. However, consideration should be put forward for a soft directional push from a federal and state level. The Housing, New York plan, put forward to expand and preserve affordable housing for all New Yorkers. Yet, as showcased from the neighborhood case study, the distribution of affordable housing, even at this stage and over the past few years, continues to fall under similar patterns as it has historically. This is, of course, confided to new land being available for new construction and existing affordable housing landlords to continue to opt into the program or affordability levels to be extended. An administrational push towards more equitable development and affordable housing distribution could push through soft directional policies that dictate areas of focus under standardized variables. That shift could create incentivized opportunities for private developers to expand into subsidized dwelling development where they otherwise could not fiscally.

To achieve equitable directional placement, the city can establish a standard variable that can assist with raising local level policies in an otherwise already defined affordable housing landscape. From a planning standpoint, the easiest way to do so is to create a less strict regulatory environment for development. Easement of regulations for the development of assisted and subsidized housing can bring through newly incentivized developers who get the opportunity to invest and develop in a shorter timeline, and one that would not necessarily require a myriad of challenges to overcome. However, such a policy change can lead to an unparalleled lack of development control. Therefore additional research needs to be conducted on establishing a dependent variable that makes such a change possible while reducing its possible drawbacks.

Furthermore, discussions have taken place in the past arguing the applicability of the Area Median Income and the extent to which it assists or hinders development. Primary arguments have been made on establishing a new standard of calculating the AMI, whether doing so locally between neighborhoods or excluding other municipalities such as Rockland County, Putnam County, and Westchester County, all affecting the city's total AMI brackets yearly. Although such a change can be positive at some local levels, there is a need to acknowledge that existing AMI brackets have also made the development of extremely low-income housing financially feasible in higher income neighborhoods. A push of the AMI to 120+% can allow developers to allocate some units in competitive neighborhoods at the lowest bracket of 30%, effectively enabling people's socioeconomic capabilities to move into the area. However, this tradeoff skews on the market-side of economics. The development plan and unit distribution usually get determined with maximization of revenue in mind, and the case remains the same even when providing affordable housing units. Developers and landlords will

ultimately seek to offset the costs that a subsidized unit has on their total revenue. They do so by configuring the best possible unit split to maximize returns and meet government programmatic requirements.

Additionally, the AMI application on a local level can have further negative drawbacks. Two such adverse effects are the perpetuation of gentrification and displacement. In Brownsville, an area with a significantly below the average median income and gross rent, it is already seeing an influx of subsidized units for which residents do not qualify. While local AMI classification could boost development on some brackets, it can also render the development of strictly very-low and extremely-low income impossible as more people influx into the area and gross rents gradually begin to go up. While AMI is not the perfect way to create affordable units today, compliance to it is required to qualify for and use federal subsidies and has played an integral role in expanding the extremely low-income and very low-income urban landscape. Research on this avenue should focus on the possible impacts of switching AMI classifications and the levels to which it will have subsequent effects on market rates and development opportunities.

Ultimately, however, the government should primarily expand the aspect and definition of affordability as it pertains to housing. Affordable housing now caters to a range of affordability brackets described by the Area Median Income (AMI) classification. However, in reality, the AMI is not a good indicator of the affordability factor, as portrayed in the second component of the analysis. The sole presence of affordable housing in the area, or lack thereof, is also not a definite indicator of the affordable housing landscape. It raises questions about its efficacy and applicability as it pertains to local citizens. Indeed, the most significant indicator that one should look at in this case is the development patterns in the Housing New York plan. The current trajectory of new construction and preservation once again falls in line with market-

dynamics and perpetuates similar problems we are trying to solve today. Therefore, the sustainability of affordable housing ties to the total methods through which one could develop it.

Conclusion

This research paper examines a series of contextual, historical, ideological, and economic variables that have fueled and influenced the trajectory of affordable housing development as it is seen today in New York City. It dives deeper into the housing programs that dominate the affordable housing market in the city today and the influencing factors that drive them. On an analytical level, it is hypothesized that affordable housing units' distribution will showcase significant spatial variances between neighborhoods. The overarching goals were to answer the question of whom affordable housing serves and whether that distribution is equal.

Through a three-part analytical approach, we the following: the affordable housing landscape lacks significant direction and is predominantly directed based on development patterns that allow private developers to create financially sound projects in the sector. The first variable paints the image of subsidized unit clustering in specific neighborhoods and total lack of development or emphasis on expansion in others. While further research is required to understand the full reasoning behind this direction, variables such as market conditions, ideological shifts in housing development, land availability, and zoning regulations have contributed to the current affordable housing landscape distribution. The second variable establishes the discrepancies between the city-wide Area Median Income (AMI) affordability classification, compared to median household incomes per neighborhood. This comparison showcases a clear divide between the affordability bracket that many local households can qualify for versus those usually offered. The last variable considers only recent development patterns of affordable housing under the Housing New York plan, and the concept of spatial disparity and lack of political intervention gets analyzed. Even with the statistical data available today, development efforts have continued on the same historical trajectory, offering little

changes to the existing landscape but rather perpetuating affordability problems in the neighborhoods in question.

While acknowledging the limitations of the indicated approaches towards affordable housing development, this paper stresses the need to conduct further research to understand the positive and adverse effects of the following policies: directional changes in housing, AMI classification measures, or distribution patterns assisted by the government. Thus, it is imperative to understand the contextual background and historical tendencies that have led to this stage of the NYC's affordable housing crisis if the city plans on intervening shortly. As a concluding consideration, we emphasize the need to expand the applicability of affordable housing by restructuring the definition of what makes a housing unit affordable and equitable. Therefore, housing should be treated as a right, not as a privilege, as we strive to address the many inequalities in place.

Works Cited

@jonathanmiller, J. M. |. (2019, August 3). *Change is Constant: 100 Years of New York Real Estate*. Miller Samuel Real Estate Appraisers & Consultants. https://www.millersamuel.com/change-is-constant-100-years-of-new-york-real-estate/.

420-C. NYC Housing Preservation and Development. https://www1.nyc.gov/site/hpd/services-and-information/tax-incentives-420-c.page.

421-a Tax Incentive – Directory of NYC Housing Programs. NYU Furman Center. https://furmancenter.org/coredata/directory/entry/421-a-tax-incentive-program.

421a Exemption. https://www1.nyc.gov/site/finance/benefits/benefits-421a.page.

Ahlbrandt, Roger S., Jr. *"Exploratory Research on the Redlining Phenomenon."* AREUEA Journal 5 (Winter 1977), 473-481.

Amy C. Kantor & John D. Nystuen (1982) De Facto Redlining a Geographic View, Economic Geography, 58:4, 309-328, DOI: 10.2307/143457

About the LIHTC. Novogradac & Company LLP. (2020, November 9). https://www.novoco.com/resource-centers/affordable-housing-tax-credits/lihtc-basics/about-lihtc.

Angotti, T., & Morse, S. (2017). *Zoned out!: race, displacement, and city planning in New York City*. Urban Research (UR).

Anzilotti, E. (2016, February 26). *The Long, Complicated History of Affordable Housing in New York*. Bloomberg.com. https://www.bloomberg.com/news/articles/2016-02-26/a-book-and-exhibit-tackle-the-long-complicated-history-of-affordable-housing-in-new-york.

Benston, G.J. (1979). "*Mortgage Redlining Research: A Review and Critical Analysis Discussion."*

Centers for Disease Control and Prevention and U.S. Department of Housing and Urban Development. Healthy housing reference manual. Atlanta: US Department of Health and Human Services; 2006.

Chen, S. (2020, January 10). *The Decade Dominated by the Ultraluxury Condo*. The New York Times. https://www.nytimes.com/2020/01/10/realestate/new-york-decade-real-estate.html.

Council on Tall Buildings and Urban Habitat, *Tall Buildings in Numbers | New York: The Ultimate Skyscraper Laboratory,* 52-53. CTBUH Journal, Issue IV, 2015.

CRS Reports. (2020). *An Introduction to the Low-Income Housing Tax Credit An Introduction to the Low-Income Housing Tax Credit*.

Curran, W. (2004). Gentrification and the Nature of Work: Exploring the Links in Williamsburg, Brooklyn. *Environment and Planning A: Economy and Space*, *36*(7), 1243–1258. https://doi.org/10.1068/a36240

Desena, J. N., & Krase, J. (2020). Brooklyn Revisited: An Illustrated View from the Street 1970 to the Present. *Gentrification around the World, Volume I*, *5*(2), 13–35. https://doi.org/10.1007/978-3-030-41337-8_2

Evans, Gary & Wells, Nancy & Moch, Annie. (2003). Housing and Mental Health: A Review of the Evidence and a Methodological and Conceptual Critique. Journal of Social Issues. 59. 475 - 500. 10.1111/1540-4560.00074.

Fahim, K. (2010, March 22). *Despite Much Rezoning, Scant Change in Residential Capacity*. The New York Times. https://www.nytimes.com/2010/03/22/nyregion/22zoning.html.

Federal Housing Administration, *Underwriting Manual: Underwriting and Valuation Procedure Under Title II of the National Housing Act With Revisions to April 1, 1936* (Washington, D.C.),

Furman Center for Real Estate and Urban Policy. (2020). *Bensonhurst Neighborhood Profile*. NYU Furman Center. https://furmancenter.org/neighborhoods/view/bensonhurst.

Furman Center for Real Estate and Urban Policy. (2020). *Borough Park Neighborhood Profile*. NYU Furman Center. https://furmancenter.org/neighborhoods/view/borough-park.

Furman Center for Real Estate and Urban Policy. (2020). *Brownsville Neighborhood Profile*. NYU Furman Center. https://furmancenter.org/neighborhoods/view/brownsville.

Glen, A. *Housing New York - A Five Borough, Ten-Year Plan*. NYC Housing Plan. https://www1.nyc.gov/site/housing/index.page.

Goworowska, J. (2008). *Gentrification, Displacement, and the Ethnic Neighborhood of Greenpoint, Brooklyn*.

Green, Richard, K., Stephen Malpezzi, and Stephen K. Mayo. 2005. "Metropolitan-Specific Estimates of the Price Elasticity of Supply of Housing, and Their Sources." *American Economic Review*, 95 (2): 334-339.DOI: 10.1257/000282805774670077

Hoffman, J. S., S Handas, V., & Pendleton, N. (2020). The Effects of Historical Housing Policies on Resident Urban Areas. *Climate - MDPI*, 1–15. https://doi.org/doi:10.3390/cli8010012

Holopainen, N. (2020). *"Whose City? Our City!" Layered Landscape of Gentrification in Brooklyn, New York* (thesis). University of Helsinki - Faculty of Social Sciences, Social and Cultural Anthropology, Helsinki.

Hutchinson, Peter M., Ostas, James R. and Reed, J. David. 1977. *"A Survey and Comparison of Redlining Influences in Urban Mortgage Lending Markets."* AREUEA Journal, 5(Winter 1977).

"Housing Act of 1949". *Approved July 15, 1949*.

Housing Choice Voucher Program Administrative Plan. https://www1.nyc.gov/assets/nycha/downloads/pdf/nycha-hcv-administrative-plan.pdf.

Inclusionary Housing Program – Directory of NYC Housing Programs. NYU Furman Center. https://furmancenter.org/coredata/directory/entry/inclusionary-zoning.

Inclusionary Housing Program. Inclusionary Housing - HPD. https://www1.nyc.gov/site/hpd/services-and-information/inclusionary-housing.page.

Ingrid Gould Ellen & Gerard Torrats-Espinosa (2019) Gentrification and Fair Housing: Does Gentrification Further Integration?, Housing Policy Debate, 29:5, 835-851, DOI: 10.1080/10511482.2018.1524440

J. Barr, "*The Economics of Manhattan Skyscrapers"*, Council on Tall Buildings and Urban Habitat. CTBUH Journal, Issue IV, 2015.

J. Barr, Forthcoming. Building the Skyline: The Birth and Growth of Manhattan's Skyscrapers. New York: Oxford University Press.

John Whitlow, Gentrification and Countermovement: The Right to Counsel and New York City's Affordable Housing Crisis, 46 Fordham Urb. L.J. 1081 (2019). Available at: https://ir.lawnet.fordham.edu/ulj/vol46/iss5/2

Lance Freeman, "America's Affordable Housing Crisis: A Contract Unfulfilled", *American Journal of Public Health* 92, no. 5 (May 1, 2002): pp. 709-712.

Lees, L. (2003). *Super-gentrification : The Case of Brooklyn Heights , New York City*. *40*(12), 2487–2509. https://doi.org/10.1080/0042098032000136174

Leonhardt, A. (2018, November 2). *Brownsville Exhibit Reveals How Structural Racism Impacts Health*. BK Reader. https://www.bkreader.com/2018/10/24/brownsville-health-center-exhibit-reveals-how-redlining-impacts-health/.

Low Income Housing Tax Credits. LIHTC - HPD. https://www1.nyc.gov/site/hpd/services-and-information/lihtc.page.

LOW-INCOME HOUSING TAX CREDIT (LIHTC). National Multifamily Housing Council. (2020). https://www.nmhc.org/globalassets/advocacy/issue-fact-sheets/lihtc_fact_sheet_2020_7.pdf.

Low-Income Housing Tax Credit Fact Sheet. NMHC. https://www.nmhc.org/advocacy/issue-fact-sheet/low-income-housing-tax-credit-fact-sheet/.

Madden, D., Marcuse, P. *"In Defense of Housing"* Dec 06, 2016 | 240 Pages | 5-1/2 x 8-1/4 | ISBN 9781784783532

Mayor de Blasio Announces New Program to Save City's Remaining Affordable Mitchell-Lama Developments. The official website of the City of New York. (2017, October 26). https://www1.nyc.gov/office-of-the-mayor/news/688-17/mayor-de-blasio-new-program-save-city-s-remaining-affordable-mitchell-lama-developments.

Mitchell Ph.D., B. (2018, December 18). *HOLC "redlining" maps: The persistent structure of segregation and economic inequality »*. NCRC. https://ncrc.org/holc/

Monetizing the Value of Social Investments. https://www.liifund.org/wp-content/themes/liifund/calc2015/misc/liif_social_impact_calculator_methodology.pdf.

Morris, S. (2020, February 9). *Developers Pursue Zoning Amendments for Affordable Housing Block at 803 Rockaway Avenue in Brownsville, Brooklyn*. New York NIMBY. https://newyorkyimby.com/2020/02/developers-pursue-zoning-amendments-for-affordable-housing-block-at-803-rockaway-avenue-in-brownsville-brooklyn.html

Morris, S. S. (aka M. (2016, April 5). *From Redlining to Predatory Lending in Brooklyn*. Brownstoner. https://www.brownstoner.com/history/redlining-racism-brooklyn-neighborhoods-bed-stuy-williamsburg-2/.

New York Law School - Center for NYC Law. (2005, July 15). *Bensonhurst down-zoned*. CityLand. https://www.citylandnyc.org/bensonhurst-down-zoned

NCRC, Mitchell Ph.D., B., & Franco, J. (2018, February). *HOLC "Redlining" Maps: The Persistent Structure of Segregation and Economic Inequality*. NCRC Research. https://ncrc.org/wp-content/uploads/dlm_uploads/2018/02/NCRC-Research-HOLC- 10.pdf

Nicholas, B. (2019, August 16). *The Master Planners of New York: Inside Look at Brownsville, BK*. Black + Urban. https://www.blackandurban.com/sustainability-habitation/2020/1/15/the-master-planners-of-new-york-inside-look-at-brownsville-bk

NYC Dept. of Housing Preservation and Development. (2019). *Appendix Z Selected Initial Findings of the 2017 York City Housing and Vacancy Survey*. Rent Guidelines Board. https://rentguidelinesboard.cityofnewyork.us/wp-content/uploads/2019/08/appendixz.pdf.

NYC Department of Housing Preservation & Development. (2017). *The Brownsville Plan*.

NYC.gov. (2005). *Bensonhurst - Approved !* 3–8.

NYC Housing Authority, NYCHA Fact Sheet - NYCHA 2.0 (2019). New York, NY.

NYC Housing Authority. (2020). *About Section 8* . About Section 8 - NYCHA. https://www1.nyc.gov/site/nycha/section-8/about-section-8.page.

NYC Housing Authority. *About NYCHA*. NYCHA - About. https://www1.nyc.gov/site/nycha/about/about-nycha.page.

NYC Planning. (2020). - *New York City's Zoning & Land Use Map*. ZoLa - NYC Planning. https://zola.planning.nyc.gov

NYC Planning - Zoning Districts & Tools. (2020). NYC.Gov. https://www1.nyc.gov/site/planning/zoning/districts-tools/r6.page

NYU Furman - The Stoop. (2020, March 24). *New York's Housing Insecurity By The Numbers*. Furman Center. https://furmancenter.org/thestoop/entry/nyc-housing-insecurity-by-the-numbers

Orlebeke, C. J. (2000). *The Evolution of Low-Income Housing Policy , 1949 to 1999*. *11*(2), 489–520.

Perm J. Access to Affordable Housing Promotes Health and Well-Being and Reduces Hospital Visits. (2018); 22: 17-079. Published online 2017 Nov 15. Doi: 10.7812/TPP/17-079

Perry, A. M., & Harshbarger, D. (2019, October 14). *America's formerly redlined neighborhoods have changed, and so must solutions to rectify them*. Brookings. https://www.brookings.edu/research/americas-formerly-redlines-areas-changed-so-must-solutions/

Plunz, Richard, A Housing History in NYC, 1990.

Polanyi, K. (2001). *The Great Transformation: The Political and Economic Origins of Our Time*, 2nd ed. Foreword by Joseph E. Stiglitz; introduction by Fred Block. Boston: Beacon Press. ISBN 9780807056431.[23]

Reina, V., & Williams, M. (2012). The Importance of Using Layered Data To Analyze Housing: The Case of the Subsidized Housing Information Project. *Cityscape: A Journal of Policy Development and Research*, *14*(1), 215–222.

Rent Control – Directory of NYC Housing Programs. NYU Furman Center. https://furmancenter.org/coredata/directory/entry/rent-control.

Rent Regulation – Directory of NYC Housing Programs. NYU Furman Center. https://furmancenter.org/coredata/directory/entry/rent-regulation.

Rodriguez, C. (2013, July 9). *As Bloomberg Built Affordable Housing, City Became Less Affordable*. Furmancenter.org. https://furmancenter.org/files/media/7.9.13_As_Bloomberg_Built_Affordable_Housing__City_Became_Less_Affordable_-_WNYC.pdf.

Rolnik, R. (2013), Debates and Developments. Int J Urban Reg Res, 37: 1058-1066. https://doi.org/10.1111/1468-2427.12062

Schuerman, M. (2013). *New York, the Vertical City, Kept Rising Under Bloomberg*. Furman Center. https://furmancenter.org/files/media/7-8-13_New_York__the_Vertical_City__Kept_Rising_Under_Bloomberg_-_WNYC.pdf.

Schill, M. (2005). Regulations and Housing Development: What We Need To Know. *Cityscape, 8*(1), 243-249. Retrieved November 18, 2020, from http://www.jstor.org/stable/20868577

Shaw, R. (2020). Generation Priced Out: Who Gets to Live in the New Urban America, with a New Preface. United States: University of California Press

Smith S., Market urbanism, 2015

Stoloff, Jennifer. (2004). A brief history of public housing.

Story, L., & Saul, S. (2015, February 7). *Stream of Foreign Wealth Flows to Elite New York Real Estate*. The New York Times. https://www.nytimes.com/2015/02/08/nyregion/stream-of-foreign-wealth-flows-to-time-warner-condos.html.

Tax Credits and Incentives. Tax Credits and Incentives - HPD. https://www1.nyc.gov/site/hpd/services-and-information/tax-credits-and-incentives.page

The City of New York Mayor De Blasio. (2019). *Housing New York - A Five Borough, Ten-Year Plan*. NYC.gov/housing. http://www.nyc.gov/html/housing/assets/downloads/pdf/housing_plan.pdf.

The New York City Independent Budget Office. (2019, February). *Affordable for Whom? Comparing Affordability Levels of the Mayor's Housing New York Plan With Neighborhood Incomes* . Affordable for Whom? Comparing Affordability Levels of the Mayor's Housing New York Plan With Neighborhood Incomes. https://ibo.nyc.ny.us/iboreports/affordable-for-whom-comparing-affordability-levels-of-the-mayors-housing-new-york-plan-with-neighborhood-incomes-february-2019.html.

The New York Times. (2015, February 12). *A Summary: The Hidden Money Buying Condos at the Time Warner Center (Published 2015)*. The New York Times. https://www.nytimes.com./2015/02/08/nyregion/the-hidden-money-buying-up-new-york-real-estate.html.

The New York Times. "*New Zoning Code Goes Into Effect" Dec 15, 1961. PDF*

Thomas, J. R. (2019). *Separated by Design: Why Affordable Housing Is Built in Areas With High Crime, Few Jobs and Struggling Schools*. ProPublica. https://www.propublica.org/article/separated-by-design-why-affordable-housing-is-built-in-areas-with-high-crime-few-jobs-and-struggling-schools.

The history of Mitchell-Lama housing; See new waiting lists openings. City Realty. https://www.cityrealty.com/nyc/market-insight/features/get-to-know/the-history-mitchell-lama-housing-see-new-waiting-lists-openings/19562.

U.S. Housing and Urban Development Dept. (2005). *"Why not in our community?" removing barriers to affordable housing: an update to the Report of the Advisory Commission on Regulatory Barriers to Affordable Housing*.

Walker, A. (2017, August 16). *Rents are increasing twice as fast as wages in New York*. Curbed NY. https://ny.curbed.com/2017/8/16/16154956/nyc-rent-prices-wage-increase-comparison.

Warf, B. (1990). The reconstruction of social ecology and neighborhood change in Brooklyn. *Environment and Planning D: Society and Space*, *8*(1), 73–96. https://doi.org/10.1068/d080073

Wetzstein, S. (2017) The global urban housing affordability crisis. Volume: 54 issue: 14, page(s): 3159-3177

Wilson, B., & Wilson, B. (2020). the Legacy of Redlining. *Journal of the American Planning Association*, *86*(4), 443–457. https://doi.org/10.1080/01944363.2020.1759127

Yaskil, D. N. (2014). *The Unfulfilled Promise of Neoliberal Housing Policy*.

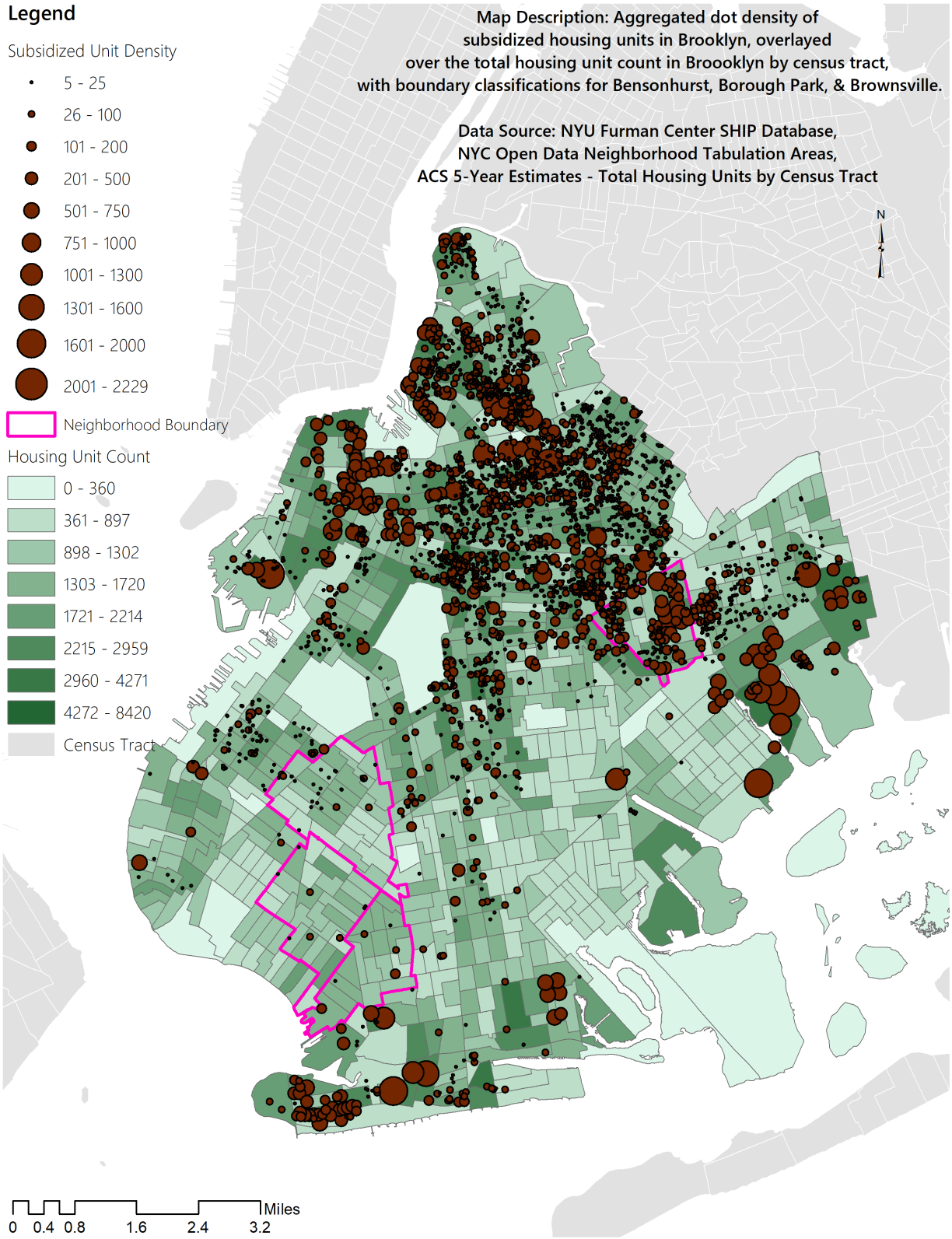
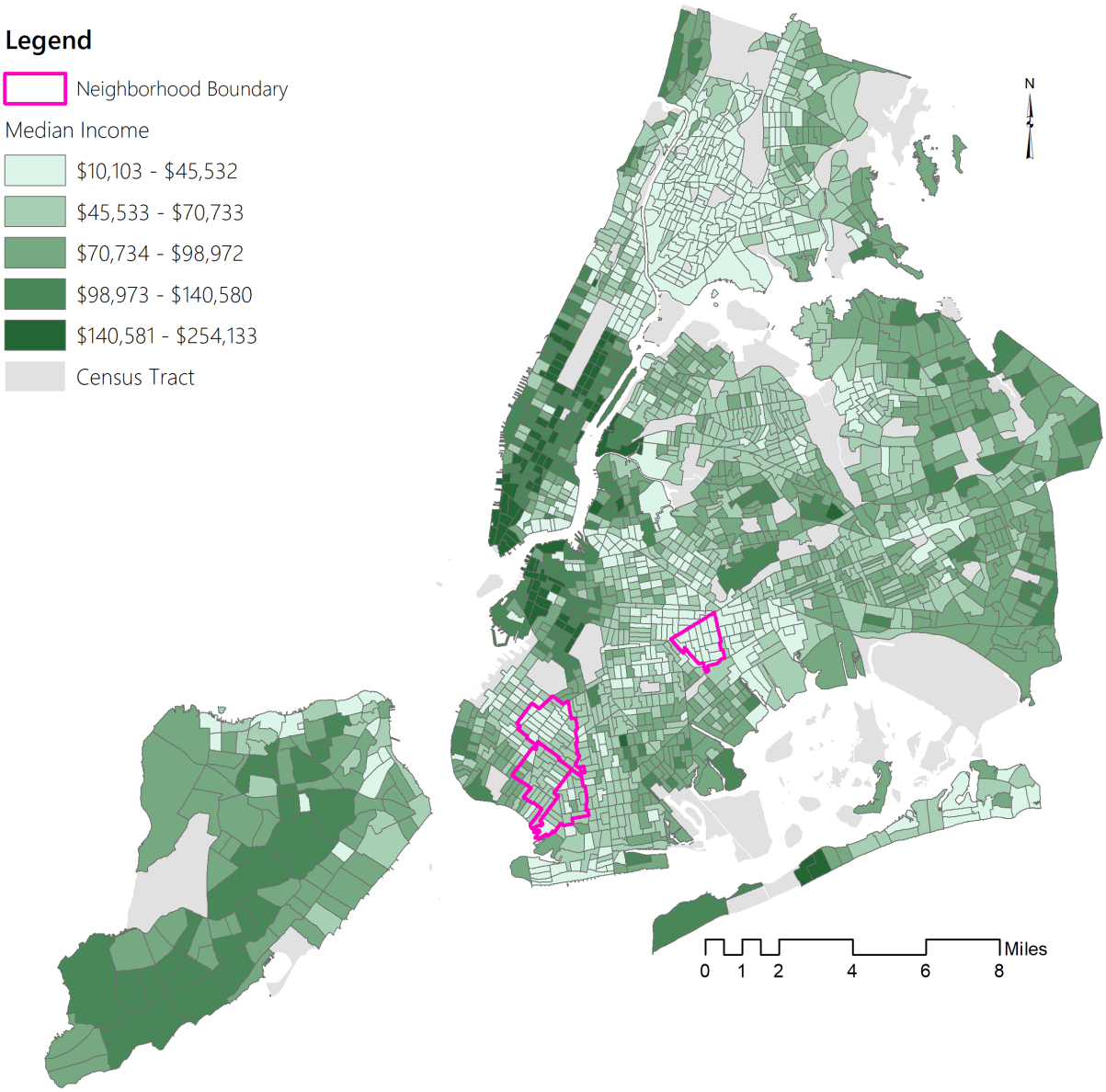


Figure 3.01: *Aggregated dot density classification of subsidized units in Brooklyn, overlaid over the total housing unit count per census tract, with the NTA boundaries of East & West Bensonhurst, Borough Park, and Brownsville pointed out. Expanded aggregation variables for greater sensitivity.*



Map Description: Median Household Income in NYC, aggregated by census tract through natural intervals

Data Source: NYU Furman Center SHIP Database,
NYC Open Data Neighborhood Tabulation Areas,
ACS 5-Year Estimates - Median Income in the Past 12 Months - 2018

Figure 3.02: *Median household income distribution in NYC in 2018, aggregated by census tracts and graduated colors over natural breaks, with NTA boundaries for East & West Bensonhurst, Borough Park, and Brownsville.*

Table 3.03: Housing New York Developments - Community Board 11

Development Type	Development Program	Completion Yea	Total Unit Count	0 - 30% AMI	31 - 50% AMI	51 - 80% AMI	81 - 120% AMI	120 - 165% AMI	Other Income
New Construction	Homeowner Assistance Pro	2019	1	0	0	1	0	0	0
New Construction	Homeowner Assistance Pro	2018	1	0	0	1	0	0	0
New Construction	Homeowner Assistance Pro	2018	1	0	0	1	0	0	0
Preservation	Multifamily Finance Program	2019	168	110	57	0	0	0	1
Preservation	Multifamily Finance Program	2019	62	5	57	0	0	0	0
Preservation	Multifamily Finance Program	2019	63	3	59	0	0	0	1
New Construction	Homeowner Assistance Pro	2017	1	0	0	1	0	0	0
New Construction	Homeowner Assistance Pro	2017	1	0	1	0	0	0	0
New Construction	Homeowner Assistance Pro	2016	1	0	0	1	0	0	0
New Construction	Homeowner Assistance Pro	2016	1	0	0	1	0	0	0
Preservation	Multifamily Finance Program	2017	71	0	70	0	0	0	1
New Construction	Homeowner Assistance Pro	2014	1	0	0	1	0	0	0
New Construction	Homeowner Assistance Pro	2014	1	0	0	1	0	0	0

Table 3.04: Housing New York Developments - Community Board 12

Development Type	Development Program	Completion Yea	Total Unit Count	0 - 30% AMI	31 - 50% AMI	51 - 80% AMI	81 - 120% AMI	120 - 165% AMI	Other Income
New Construction	Multifamily Incentives Progra	Ongoing	10	0	0	0	0	3	0
New Construction	Homeowner Assistance Pro	2019	1	0	1	0	0	0	0
New Construction	Multifamily Incentives Progra	Ongoing	7	0	0	0	0	3	0
New Construction	Homeowner Assistance Pro	2018	1	0	0	1	0	0	0
New Construction	Homeowner Assistance Pro	2016	1	0	0	1	0	0	0
Preservation	Homeowner Assistance Pro	2015	2	2	0	0	0	0	0
New Construction	Small Homes Program	2019	4	0	0	0	4	0	0
New Construction	Small Homes Program	2019	4	0	0	0	4	0	0
New Construction	Small Homes Program	2019	4	0	0	0	4	0	0
New Construction	Small Homes Program	2019	4	0	0	0	4	0	0
New Construction	Small Homes Program	2019	4	0	0	0	4	0	0
New Construction	Small Homes Program	2019	4	0	0	0	4	0	0
New Construction	Small Homes Program	2019	4	0	0	0	4	0	0
New Construction	Small Homes Program	2019	4	0	0	0	4	0	0
New Construction	Small Homes Program	2019	4	0	0	0	4	0	0
Preservation	Multifamily Incentives Progra	2017	182	0	0	181	0	0	1
Preservation	Homeowner Assistance Pro	2014	1	0	0	0	0	1	0
New Construction	Homeowner Assistance Pro	2014	1	0	0	1	0	0	0
New Construction	Homeowner Assistance Pro	2014	1	0	0	1	0	0	0

Table 3.05: Housing New York Developments - Community Board 16

Development Type	Development Program	Completion Yea	Total Unit Count	0 - 30% AMI	31 - 50% AMI	51 - 80% AMI	81 - 120% AMI	120 - 165% AMI	Other Income
New Construction	Multifamily Incentives Progra	Ongoing	2	0	0	0	0	2	0
New Construction	Multifamily Incentives Progra	Ongoing	12	0	0	0	0	3	0
New Construction	Multifamily Incentives Progra	Ongoing	8	0	0	0	0	3	0
New Construction	Multifamily Incentives Progra	Ongoing	8	0	0	0	0	3	0
New Construction	Multifamily Incentives Progra	2020	8	0	0	0	0	3	0
New Construction	Multifamily Incentives Progra	2020	8	0	0	0	0	3	0
New Construction	Multifamily Incentives Progra	Ongoing	6	0	0	0	0	2	0
New Construction	Multifamily Incentives Progra	Ongoing	8	0	0	0	0	3	0
New Construction	Multifamily Incentives Progra	Ongoing	9	0	0	0	0	3	0
New Construction	Multifamily Incentives Progra	Ongoing	78	9	12	57	0	0	0
New Construction	Multifamily Incentives Progra	Ongoing	98	1	64	33	0	0	0
New Construction	Multifamily Incentives Progra	Ongoing	174	9	80	84	0	0	0
New Construction	Multifamily Incentives Progra	Ongoing	5	0	0	2	0	0	0
Preservation	Homeowner Assistance Pro	2020	1	0	0	0	1	0	0
New Construction	Multifamily Incentives Progra	2019	41	0	4	7	0	2	0
New Construction	Multifamily Incentives Progra	2017	7	0	0	0	0	3	0
New Construction	Multifamily Finance Program	2014	118	30	24	64	0	0	0
Preservation	Multifamily Finance Program	2014	6	0	2	4	0	0	0
Preservation	Multifamily Finance Program	2014	4	0	2	2	0	0	0
Preservation	Multifamily Finance Program	Ongoing	4	0	3	1	0	0	0
Preservation	Multifamily Finance Program	Ongoing	4	1	1	2	0	0	0
Preservation	Multifamily Finance Program	Ongoing	6	0	5	1	0	0	0
Preservation	Multifamily Finance Program	Ongoing	6	3	2	1	0	0	0
Preservation	Multifamily Finance Program	Ongoing	4	1	2	1	0	0	0
Preservation	Multifamily Finance Program	Ongoing	6	1	4	1	0	0	0
Preservation	Multifamily Finance Program	Ongoing	12	1	9	2	0	0	0
Preservation	Multifamily Finance Program	Ongoing	6	3	2	1	0	0	0
Preservation	Multifamily Finance Program	Ongoing	3	0	0	3	0	0	0
Preservation	Multifamily Finance Program	Ongoing	3	0	2	1	0	0	0
Preservation	Multifamily Finance Program	Ongoing	3	1	2	0	0	0	0
Preservation	Multifamily Finance Program	Ongoing	4	0	3	0	0	0	1
Preservation	Multifamily Finance Program	Ongoing	6	1	4	1	0	0	0
Preservation	Multifamily Finance Program	Ongoing	6	1	4	1	0	0	0
Preservation	Multifamily Finance Program	Ongoing	4	1	1	1	0	0	1
Preservation	Multifamily Finance Program	Ongoing	4	1	2	1	0	0	0
Preservation	Multifamily Finance Program	Ongoing	4	1	2	1	0	0	0
Preservation	Homeowner Assistance Pro	Ongoing	1	0	0	1	0	0	0
New Construction	Multifamily Incentives Progra	Ongoing	7	0	0	0	0	2	0
Preservation	Homeowner Assistance Pro	Ongoing	4	0	0	4	0	0	0
New Construction	Multifamily Incentives Progra	Ongoing	8	0	0	0	0	3	0
New Construction	Multifamily Incentives Progra	Ongoing	8	0	0	0	0	3	0
New Construction	Multifamily Incentives Progra	2019	8	0	0	2	0	0	0
New Construction	Multifamily Incentives Progra	Ongoing	33	0	7	0	0	3	0
New Construction	Multifamily Finance Program	2019	180	18	36	125	0	0	1
New Construction	Multifamily Incentives Progra	Ongoing	24	0	0	0	0	4	0
New Construction	Multifamily Incentives Progra	Ongoing	24	0	0	0	0	4	0
Preservation	Homeowner Assistance Pro	2019	3	0	0	3	0	0	0
Preservation	Homeowner Assistance Pro	Ongoing	2	0	0	2	0	0	0
New Construction	Multifamily Finance Program	Ongoing	126	88	25	12	0	0	1
Preservation	Multifamily Finance Program	2018	77	67	8	1	0	0	1
New Construction	Multifamily Finance Program	2018	197	40	40	116	0	0	1
New Construction	Small Homes Program	2019	3	0	0	0	3	0	0
New Construction	Small Homes Program	2018	3	0	0	0	3	0	0
New Construction	Small Homes Program	Ongoing	3	0	0	0	3	0	0
New Construction	Small Homes Program	2018	3	0	0	0	3	0	0
New Construction	Small Homes Program	2018	3	0	0	0	3	0	0
New Construction	Small Homes Program	2019	3	0	0	0	3	0	0
New Construction	Small Homes Program	2018	3	0	0	0	3	0	0
New Construction	Small Homes Program	Ongoing	3	0	0	0	3	0	0
New Construction	Multifamily Finance Program	2018	67	17	15	34	0	0	1
Preservation	Homeowner Assistance Pro	Ongoing	4	0	0	0	4	0	0
New Construction	Multifamily Finance Program	Ongoing	71	50	4	16	0	0	1
New Construction	Small Homes Program	Ongoing	7	0	0	7	0	0	0
New Construction	Small Homes Program	Ongoing	10	0	0	10	0	0	0
New Construction	Small Homes Program	Ongoing	8	0	0	8	0	0	0
Preservation	Multifamily Finance Program	Ongoing	6	0	5	1	0	0	0
Preservation	Multifamily Finance Program	Ongoing	16	2	12	2	0	0	0
Preservation	Multifamily Finance Program	Ongoing	4	0	3	1	0	0	0
Preservation	Multifamily Finance Program	Ongoing	6	1	3	2	0	0	0
Preservation	Multifamily Finance Program	Ongoing	6	0	5	1	0	0	0
Preservation	Multifamily Finance Program	2018	11	2	6	3	0	0	0
Preservation	Multifamily Finance Program	Ongoing	6	0	4	2	0	0	0
Preservation	Multifamily Finance Program	Ongoing	6	1	4	1	0	0	0
Preservation	Multifamily Incentives Progra	Ongoing	12	0	0	11	0	0	1
Preservation	Multifamily Incentives Progra	Ongoing	36	0	0	36	0	0	0
Preservation	Multifamily Incentives Progra	2019	12	0	0	12	0	0	0
Preservation	Multifamily Incentives Progra	2019	12	0	0	12	0	0	0
Preservation	Multifamily Incentives Progra	2019	12	0	0	12	0	0	0
Preservation	Multifamily Incentives Progra	2019	24	0	0	24	0	0	0
Preservation	Multifamily Incentives Progra	2019	12	0	0	12	0	0	0
Preservation	Multifamily Incentives Progra	2019	12	0	0	12	0	0	0
Preservation	Multifamily Incentives Progra	2019	12	0	0	12	0	0	0
Preservation	Multifamily Incentives Progra	2019	12	0	0	12	0	0	0
Preservation	Multifamily Incentives Progra	2016	12	0	0	12	0	0	0
Preservation	Multifamily Incentives Progra	2016	12	0	0	12	0	0	0
Preservation	Multifamily Incentives Progra	2016	12	0	0	12	0	0	0
Preservation	Multifamily Incentives Progra	2016	12	0	0	12	0	0	0
Preservation	Multifamily Incentives Progra	2016	12	0	0	12	0	0	0
Preservation	Multifamily Incentives Progra	2016	12	0	0	12	0	0	0
Preservation	Homeowner Assistance Pro	2016	2	0	2	0	0	0	0
Preservation	Multifamily Finance Program	2016	385	135	14	236	0	0	0
New Construction	Multifamily Finance Program	2016	135	27	19	88	0	0	1
Preservation	Multifamily Incentives Progra	2016	359	0	0	0	358	0	1
Preservation	Multifamily Incentives Progra	2016	359	0	0	0	358	0	1
Preservation	Multifamily Finance Program	2016	18	0	0	10	0	8	0
Preservation	Multifamily Finance Program	2016	2	0	0	2	0	0	0
Preservation	Multifamily Finance Program	2016	6	0	2	4	0	0	0
Preservation	Multifamily Finance Program	2016	6	0	2	4	0	0	0
Preservation	Multifamily Finance Program	2016	23	0	0	20	0	3	0
Preservation	Multifamily Finance Program	2016	12	0	1	10	0	1	0
Preservation	Multifamily Finance Program	2016	16	0	1	12	0	3	0
Preservation	Multifamily Finance Program	2018	20	0	4	15	0	1	0
Preservation	Multifamily Finance Program	2016	12	0	0	10	0	2	0
Preservation	Multifamily Finance Program	2016	16	0	1	15	0	0	0
Preservation	Multifamily Finance Program	2017	23	0	2	12	0	9	0
Preservation	Multifamily Finance Program	2017	6	0	0	6	0	0	0
Preservation	Multifamily Finance Program	2017	6	0	0	4	0	2	0
Preservation	Multifamily Finance Program	2017	16	0	0	15	0	1	0
Preservation	Multifamily Finance Program	2017	6	0	0	5	0	1	0
Preservation	Multifamily Finance Program	2017	2	0	0	2	0	0	0
Preservation	Multifamily Finance Program	2017	16	0	3	13	0	0	0
Preservation	Multifamily Finance Program	No Data	6	0	0	6	0	0	0
Preservation	Multifamily Finance Program	No Data	6	0	4	2	0	0	0
Preservation	Multifamily Finance Program	2017	6	0	0	6	0	0	0
Preservation	Multifamily Finance Program	2017	6	0	3	3	0	0	0
Preservation	Multifamily Finance Program	2017	6	0	3	3	0	0	0
Preservation	Multifamily Finance Program	2017	8	0	2	6	0	0	0
Preservation	Multifamily Finance Program	2017	3	0	1	1	0	1	0
Preservation	Multifamily Finance Program	2017	6	0	2	4	0	0	0
Preservation	Multifamily Finance Program	2017	6	0	1	5	0	0	0
Preservation	Multifamily Finance Program	2017	16	0	10	6	0	0	0
Preservation	Multifamily Finance Program	2017	16	0	2	11	0	3	0
Preservation	Multifamily Finance Program	2017	8	0	0	6	0	2	0
Preservation	Multifamily Finance Program	2017	26	0	2	16	0	8	0
Preservation	Multifamily Finance Program	2017	6	0	0	6	0	0	0
Preservation	Multifamily Finance Program	2017	2	0	2	0	0	0	0
Preservation	Homeowner Assistance Pro	2017	2	0	0	2	0	0	0
New Construction	Multifamily Incentives Progra	2017	8	0	0	2	0	0	0
Preservation	Multifamily Finance Program	2017	18	0	0	18	0	0	0
Preservation	Multifamily Finance Program	2017	6	0	0	6	0	0	0
Preservation	Multifamily Finance Program	2017	19	0	0	19	0	0	0
New Construction	Multifamily Finance Program	2017	101	75	0	25	0	0	1
New Construction	Multifamily Finance Program	2017	161	96	0	64	0	0	1

Preservation	Multifamily Finance Program	2017	7	0	3	4	0	0	0
Preservation	Multifamily Finance Program	2017	6	0	1	5	0	0	0
Preservation	Multifamily Finance Program	2017	6	0	0	6	0	0	0
Preservation	Multifamily Finance Program	2016	5	0	0	5	0	0	0
Preservation	Multifamily Finance Program	2017	5	0	0	5	0	0	0
Preservation	Multifamily Finance Program	2019	4	0	1	3	0	0	0
Preservation	Multifamily Finance Program	2019	4	0	1	2	0	0	1
Preservation	Multifamily Finance Program	2019	16	0	0	15	0	0	1
Preservation	Multifamily Finance Program	2017	5	0	0	5	0	0	0
Preservation	Multifamily Finance Program	2017	7	0	0	7	0	0	0
Preservation	Multifamily Finance Program	2018	9	0	0	9	0	0	0
Preservation	Multifamily Finance Program	2018	5	0	0	5	0	0	0
Preservation	Multifamily Finance Program	2018	6	0	0	6	0	0	0
Preservation	Multifamily Finance Program	2018	4	0	0	4	0	0	0
Preservation	Multifamily Finance Program	2018	4	0	0	3	0	0	1
Preservation	Multifamily Finance Program	2018	9	0	0	9	0	0	0
Preservation	Multifamily Finance Program	2018	8	0	1	7	0	0	0
Preservation	Multifamily Finance Program	2018	4	0	0	4	0	0	0
Preservation	Multifamily Finance Program	2018	12	0	4	8	0	0	0
Preservation	Multifamily Finance Program	2018	19	0	0	19	0	0	0
Preservation	Multifamily Finance Program	2018	8	0	0	8	0	0	0
New Construction	Homeowner Assistance Pro	2018	1	0	0	1	0	0	0
Preservation	Multifamily Finance Program	2018	8	0	0	8	0	0	0
Preservation	Multifamily Finance Program	2018	6	0	2	4	0	0	0
Preservation	Multifamily Finance Program	2018	7	1	0	6	0	0	0
Preservation	Multifamily Finance Program	2018	7	1	0	6	0	0	0
Preservation	Multifamily Finance Program	2018	7	0	0	7	0	0	0
Preservation	Multifamily Finance Program	2018	37	12	0	24	0	0	1
New Construction	Multifamily Finance Program	2018	79	56	0	22	0	0	1
New Construction	Multifamily Finance Program	2017	55	50	0	5	0	0	0
New Construction	Multifamily Finance Program	2017	101	42	6	52	0	0	1
New Construction	Multifamily Finance Program	2015	48	20	4	24	0	0	0
Preservation	Multifamily Finance Program	2017	252	0	0	251	0	0	1
Preservation	Multifamily Incentives Progra	2017	95	0	0	93	0	0	2
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	6	0	0	6	0	0	0
Preservation	Multifamily Incentives Progra	2016	32	0	0	32	0	0	0
Preservation	Multifamily Incentives Progra	2016	32	0	0	32	0	0	0
Preservation	Multifamily Incentives Progra	2017	7	0	0	7	0	0	0
Preservation	Multifamily Incentives Progra	2017	40	0	0	40	0	0	0
Preservation	Multifamily Incentives Progra	2017	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	5	0	0	5	0	0	0
Preservation	Multifamily Incentives Progra	2016	5	0	0	5	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	53	0	0	53	0	0	0
Preservation	Multifamily Incentives Progra	2016	11	0	0	11	0	0	0
Preservation	Multifamily Incentives Progra	2016	5	0	0	5	0	0	0
Preservation	Multifamily Incentives Progra	2016	5	0	0	5	0	0	0
Preservation	Multifamily Incentives Progra	2016	35	0	0	35	0	0	0
Preservation	Multifamily Incentives Progra	2016	36	0	0	36	0	0	0
Preservation	Multifamily Incentives Progra	2016	6	0	0	6	0	0	0
Preservation	Multifamily Incentives Progra	2016	32	0	0	32	0	0	0
Preservation	Multifamily Incentives Progra	2016	6	0	0	6	0	0	0
Preservation	Multifamily Incentives Progra	2016	6	0	0	6	0	0	0
Preservation	Multifamily Incentives Progra	2016	12	0	0	12	0	0	0
Preservation	Multifamily Incentives Progra	2016	41	0	0	41	0	0	0
Preservation	Multifamily Incentives Progra	2016	6	0	0	6	0	0	0
Preservation	Multifamily Incentives Progra	2016	17	0	0	17	0	0	0
Preservation	Multifamily Incentives Progra	2016	32	0	0	32	0	0	0
Preservation	Multifamily Incentives Progra	2016	6	0	0	6	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	2	0	0	2	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Multifamily Incentives Progra	2016	4	0	0	4	0	0	0
Preservation	Homeowner Assistance Pro	2016	3	0	0	3	0	0	0
Preservation	Homeowner Assistance Pro	2016	2	0	0	2	0	0	0
New Construction	Multifamily Finance Program	2016	78	0	33	44	0	0	1
New Construction	Multifamily Finance Program	2016	32	0	13	19	0	0	0
New Construction	Homeowner Assistance Pro	2016	1	0	0	1	0	0	0
New Construction	Small Homes Program	2016	4	0	0	4	0	0	0
New Construction	Small Homes Program	2016	3	0	0	3	0	0	0
New Construction	Small Homes Program	2016	4	0	0	4	0	0	0
New Construction	Small Homes Program	2016	4	0	0	4	0	0	0
Preservation	Multifamily Finance Program	2016	12	0	0	12	0	0	0
Preservation	Multifamily Finance Program	2014	16	0	0	15	0	0	1
Preservation	Multifamily Finance Program	2018	16	0	0	16	0	0	0
Preservation	Multifamily Finance Program	2018	31	0	0	19	12	0	0
Preservation	Multifamily Finance Program	2018	6	0	0	6	0	0	0
Preservation	Multifamily Finance Program	2018	6	0	0	6	0	0	0
Preservation	Multifamily Finance Program	2016	2	0	0	2	0	0	0
Preservation	Multifamily Finance Program	2016	2	0	0	2	0	0	0
New Construction	Multifamily Finance Program	2016	80	40	16	23	0	0	1
New Construction	Homeowner Assistance Pro	2016	1	0	0	1	0	0	0
Preservation	Homeowner Assistance Pro	2019	4	0	0	4	0	0	0
New Construction	Homeowner Assistance Pro	2019	1	0	0	1	0	0	0
New Construction	Homeowner Assistance Pro	2019	1	0	0	1	0	0	0
New Construction	Homeowner Assistance Pro	2019	1	0	0	1	0	0	0